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Society Reports.

TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF CINCINNATI.

Stated Meeting, February 10, 1885.

The President, DR. A. J. MILES, in the Chair.

INAUGURAL ADDRESS.

Dr. Miles, upon assuming the duties of the presiding officer for the ensuing year, addressed the Society as follows:

Members of the Cincinnati Obstetrical Society: My first and most pleasing duty is to express to you my sincere and heartfelt thanks for the distinguished honor you have conferred upon me in electing me your presiding officer for the present year.

We are now entering upon our eighth year, with everything to encourage us. The work of the Society in the past has been excellent. Let us endeavor to make this year, the best in its history. Being one of the original members, I well remember how some of us hesitated much about being able to establish permanently a Society for this special department of medicine while there were two general medical societies in the city, and most of the members of the new Society already belonging to either one or both of these.

Most of us were enthusiastic and depicted for the new venture a bright and prosperous future, for, as a branch of practice which includes much of the daily work of the practitioner and involves much of the deepest and most anxious responsibilities with which he has to deal, there is no department of medicine of greater importance than that which is the special province of this Society to cultivate and advance.

The average attendance at the meetings of the Society, for the number of its members, is, I am sure, greater than the other societies of the city. The papers read and cases reported are full of interest, and the proceedings of our Society, as published in the obstetrical journals, compare favorably with those of like societies. Our membership is limited to twenty and we have during the year ten meetings. If all the members would attend and participate in the plan, by dividing the time, each member would have to prepare a paper and report a case once in two years, and it would give us one paper and one report of a case at each meeting, which would make it not only pleasant and profitable but about all we could well digest for the evening.

Physicians are constantly coming in contact with peculiar and obscure cases so rare that little or nothing is said of them in the text-books, yet which have to be treated cautiously and expertly. The report of these rare cases with the treatment used, and the discussions of the same, are of great advantage in developing the nature and mode of treatment of such cases.

The discussions of the subjects presented to the Society could no where else be adequately attempted. The contact with the experience of others, and the sharp criticism, though unpleasant it may sometimes be, when our cherished views are under discussion by our members, is of much value in forcing a greater breadth of view which is essential to our progress.

I desire to call the attention of the Society to the subject of the *repository* and *museum*, which was inaugurated during last year, and to urge on the Society to continue their efforts in that direction. Our beginning may be small, but, with perfected arrangements and energy born of enthusiasm we can soon have a museum and repository of much value.

I wish to suggest to the Society the propriety of increasing the membership, and therefore would advise that Section 2d of the Constitution be so amended that it will read thus: The active members shall not exceed thirty in number.

When the constitution was passed the object in limiting the number of the Society to twenty was to have as members only those who took especial interest in obstetrics and gynecology and persons capable of not only presenting papers and reports of cases, but also capable of discussing subjects likely to come before the Society. This original idea should be strictly adhered to. We now have nineteen active members with an average attendance of about half that number. By increasing the number to thirty it would likely give us an average attendance of fifteen or sixteen, which, I think, would enhance the interests of the Society by giving greater variety to the proceedings and discussions without lowering our standard.

I would recommend that Dr. J. J. Quinn, one of the original members, and the first presiding officer of the Society, a place which he so ably filled for two years, be elected an honorary member. My reason for this recommendation is that he is not able to be with us at our regular meetings on account of absence from the city, and we should recognize him in some way for the good he has done for the Society in the past. He was one of the inspirators of the Society and one of the framers of the constitution and gave his enthusiastic zeal in perfecting the organization and perpetuating the Society.

In conclusion, I wish to impress it as the duty of each member, once in a year, to either read a paper or report a case, as we are all mutually

interested in maintaining the good reputation and high standing which the Society has gained for itself during the few years of its existence.

Dr. Giles S. Mitchell read the following paper on

IRREPRESSIBLE VOMITING OF PREGNANCY.

Vomiting is one of the earliest symptoms of pregnancy, and in the vast majority of cases causes only fatigue and discomfort. Occasionally however, the emesis is so oft repeated as to endanger life, or even result in death.

This exaggerated form has been named by Cazeaux irrepressible. It may manifest itself at any period of gestation, but is more likely to occur during the first months.

In forty-three cases collected by M. Gueniot vomiting occurred nine times during the first weeks of pregnancy, fifteen times near the end of the first month, nine times between the first and second months, five times between the second and third months, one time between the third and fourth months, two times between the fourth and fifth months, and twice between the sixth and seventh months. In the beginning of the irrepressible form of vomiting in pregnancy there are no characteristic or pathognomonic symptoms. In the majority of cases the vomiting in the inception is the same as in the ordinary or simple form. Indeed the one seems only an exaggeration of the other, and it is difficult to determine where the benign form ends and the pernicious begins. When the disease is once established the vomiting is frequent and nearly all nourishment is rejected.

Emesis is provoked even by the smallest quantity of fluid. The vomited matter is food, mucous tinged with blood and bile. As a rule the patient has complete anorexia. The sight of the most delicious and delicately prepared food is often sufficient to bring on an attack of vomiting. Rapid emaciation and debility soon follow. Ptyalism is sometimes a complication.

M. Gueniot, whose thesis on this subject is the most exhaustive ever written, divides the malady in its progress into three stages. The first stage differs in no respect from an ordinary case of obstinate vomiting, there being at this period no elevation of temperature. In the second stage pyrexia is the dominant feature. The axillary temperature often reaches 103°, and the frequency of the pulse is greatly increased. In the third or last stage there is often an amelioration of all the grave symptoms for a brief interval, but the apparent improvement is a delusion. In a short time all of the alarming symptoms return and death speedily terminates the suffering of the patient. Cerebral symptoms usually supervene a few days before death. Vision and hearing are disturbed, and the mind is filled with hallucinations.

Travel, change of scene, or the exhibition of some insignificant remedy often mitigate or arrest the vomiting for a time. The improvement is fugitive and not lasting, however.

Rapidity of progress does not characterize this fatal malady. Patients rarely succumb before the end of the second or third month.

Etiology. Dance taught that it was due to inflammation of uterus, placenta, and membranes.

Chomel says it is always associated with softening of the stomach and fatty degeneration of the liver.

Dr. James Henry Bennett believes ulceration of the uterine cervix is the prime factor in its production.

Graily Hewitt finds in uterine displacements the *fons et origo mali.*

Other authorities affirm that it occurs most frequently in women of lymphatic temperament. All that is definitely known concerning its etiology can be told in a single sentence. Like the benign form of the vomiting of pregnancy it is reflex, and is caused by irritation of the uterine nerves. Post-mortem examinations of its unfortunate victims reflect no additional light upon its causation or mode of progress.

Diagnosis is not always easy, since in the beginning the symptoms present are identical with those manifest in the ordinary form.

Ulceration and cancer of the stomach may complicate pregnancy.

Cazeaux mentions a fatal case of vomiting dependent upon tubercular peritonitis attributed to a pregnancy that did not exist. When the disease is fully established and the second stage reached, as described by Gueniot the diagnosis is plain. The red tongue, sore mouth, fetid breath, high temperature, rapid pulse, emaciation and incessant emesis, are symptoms readily interpreted, even by the young and inexperienced practitioner.

Prognosis. "Out of 118 cases collected by Gueniot" there were 72 recoveries and 46 deaths, represented as follows :

RECOVERIES.	
Without abortion in very severe cases after diversified treatment.	31
Following spontaneous abortion, also in very severe cases.	20
After abortion or induced labor in cases more or less desperate.	21
DEATHS.	
Without abortion.	28
After abortion or spontaneous premature labor.	7
After procured abortion.	11

These statistics teach us that many of the subjects of this distressing malady will die in spite of any and every plan of practice employed. The prognosis then in the very beginning is serious. Of course as the disorder advances the gravity of the case increases. When the so-called third stage is reached death is almost inevitable.

Treatment. The pharmacopœia mentions but few remedies that have not at one time or another been recommended for the vomiting of pregnancy. Desormeux extols the dry extract of cinchona. Walter and Blundell testify to the value of one drop doses of hydrocyanic acid 2 or 3

times daily. Stackler found the black oxid of mercury the most useful remedy. Eulenberg and Schmidt were successful with the tinct of iodine. Ricord, Bacarisse and Brauer recommend iodide of potassium. Sir J. Y. Simpson regarded oxalate of cerium as a specific for this disorder. Moreau, Rayer, and others advocate the free use of alcoholic stimulants. Chomel obtained gratifying results by prescribing the waters of Vichy and Bussong. Bretonneau ordered the abdomen to be rubbed with fl. ext. of belladonna. Dezon had faith in repeated applications to the abdomen of towels wrung out of cold water. Dance applied leeches to the cervix with marked benefit. Dr. James Henry Bennett cures his patients by cauterizing the os uteri with nitrate of silver. Dr. Fordyce Barker recommends carbonic acid water containing one drachm of bromide of potash to the siphon. Dilatation of the cervix has also the weight of high authority for its employment.

Dr. Campbell of Georgia, relates a case of a patient who was sustained for fifty-two days by rectal alimentation, and was finally delivered at term of a healthy child.

As a dernier resort abortion is justifiable. "Since the induction of abortion always subjects the operator to criticism, and as its performance is by no means unattended with risk to life, it is advisable to share the responsibility with an experienced professional colleague."

On the 15th of May, 1884, I received a telegram from Dr. Coblin of Turners Station, Ky., requesting me to meet him in consultation as soon as possible.

The patient, Mrs. E. aged 28, a brunette, lymphatic temperament, was in the third month of her first pregnancy. She had been confined to her bed for several weeks, and was markedly emaciated.

The history of the case as recited by Dr. Coblin is as follows:

Saw Mrs. E. for the first time March 20th. She complained of morning sickness, a general feeling of languor, and constipated bowels. She was a perfect picture of robust health, and weighed one hundred and fifty pounds. I prescribed oxalate of cerium in combination with sub-nitrate of bismuth for the nausea, and a laxative for the constipation. In a few days she seemed to be perfectly well. I heard nothing more from the case until April 14th, when I was again sent for. Found her suffering in the same manner as upon my previous visit, and made the same prescriptions as before with the addition of ingluvin. After waiting several days and finding the patient derived no benefit from the remedies, I changed the prescription to bromide of potash; but this remedy was tolerated for a short time only. Bitter tonics were then given, but were of no avail. In a short time her stomach became so irritable that all medicine and food were rejected. I then began the sub-cutaneous administration of ⅙ gr. sulphate of morphia in combination with the 1-120th gr. of sulphate of atropia; at first only once a day, and afterwards twice daily. She seemed

to improve for a time, and was able to retain some nourishment. The improvement was of short duration however, for in a little while the hypodermic injections lost their effect in arresting the vomiting and did good only by mitigating her pain.

Such, then in brief, is the history of the case furnished me by the family physician, Dr. Coblin, upon my first visit.

As before stated, the patient was in the third month of her first pregnancy. She was markedly emaciated, had a sore mouth and fetid breath. Instead of being in robust health and weighing one hundred and fifty pounds as in the beginning of gestation, she certainly weighed much less than one hundred. There was no pulmonary disease present and no cough. Careful inspection and palpation of the abdomen revealed nothing abnormal.

The abdominal walls were unusually thin, and any thickening or tumefaction of stomach, peritoneum or omentum could have been readily detected. Axillary temperature, 102½; pulse, 126, and feeble.

On examination per vaginum I found no uterine displacement and no disease.

The uterus was enlarged to the degree it usually is towards the end of the third month.

Vomiting was incessant. Renal secretion normal.

The induction of premature labor was suggested in consultation, but as the patient had almost reached the period of gestation, when the uterus escapes from the pelvic cavity, and vomiting usually ceases spontaneously, and as it met with strong opposition from the patient herself, we concluded to wait a short time longer.

I then recommended to Dr. Coblin that the stomach have absolute rest, and that rectal alimentation be resorted to. Nutritive enemas of milk partially digested, with Fairchild's ext. of pancreatis, together with beef tea and whisky were given every four hours. Every third day the lower bowel was carefully washed out. Small doses of morphia in combination with atropia to relieve pain were administered hypodermically.

At the end of a week Mr. E., the husband of the patient, informed me by letter that his wife was rapidly improving. She complained of no pain, had ceased to vomit and was not feverish.

At the expiration of twelve days Dr. Coblin at the earnest request of his patient, gave his consent for her to eat some solid food. Vomiting and pain soon succeeded and she grew rapidly worse. I was again sent for. Fifteen days had elapsed since my first visit. When I arrived patient was delirious, temperature 104, pulse 160. Of course under the circumstances nothing was left for me to do save to give an unfavorable prognosis and return home. Patient died on the following morning. A post mortem examination was not permitted.

DISCUSSION.

Dr. Cleveland had never seen a case like the one reported. Had become almost skeptical as to the existence of malignant vomiting caused by pregnancy, because all of the cases that had ever come under his observation were controlable, or would get well of themselves; it is not at all likely that single uncomplicated pregnancy would ever produce uncontrolable vomiting. There is probably in every case a diathetic cause behind it, that would explain the malignancy.

The reporter mentions that the whole catalogue of remedies were exhausted in this case without avail. We should bear in mind that sometimes in these cases harm may be done by promiscuous drugging.

Local treatment which has been found so efficient in the hands of some (applications to the os and distention) does not seem to have been resorted to at all.

The high fever that attended this case as it approached a fatal termination (and I am told that fever usually prevails in fatal cases of this kind) shows that probably active tuberculosis was set up, and the pregnancy was only the exciting cause.

While we recognize the impracticability of the induction of premature labor in the case reported, there is a period in every case of this kind, where the question should be seriously considered, and if the conditions are favorable we should not hesitate to perform it.

Dr. Wenning said that he was hardly justified in discussing the subject of the evening from personal experience, as he had seen but one case of fatal or irrepressible vomiting of pregnancy, and that passed out of his hands before the fatal issue.

Some five or six years ago he was called to attend a young woman about 28 or 29 years of age, who was then pregnant for the third or fourth time in the sixth month. She had vomited excessively for some days when first seen by the attendant. This patient was, however, in the last stage of consumption. She was treated at her home for a few days with but little or no benefit, and then removed to the Cincinnati Hospital where she died soon after admission.

The speaker did not know whether she died from consumption, or in consequence of the exhaustion from continued vomiting. She was terribly emaciated when first seen, and her condition was well nigh hopeless on account of the advanced stage of phthisis.

The utter futility of the remedies employed in the essayist's case, and the long list of agents usually recommended against this distressing complaint, both prove that not much can be expected from medicines. The pathology of the disease remains still obscure, but the speaker did not believe that the trouble resided in the stomach, but was due to reflex irritation. He would admit that an organic or even functional lesion of the stomach might be aggravated by the pregnant state, but that alone could not be

the cause of vomiting for he knew and met constantly with individuals with a weak stomach who did not experience any particular distress in that organ during pregnancy. Moreover it is certain that the same individuals may pass through one pregnancy with little or no vomiting, whilst this symptom may become very distressing and even alarming during another period of gestation.

The presence of tuberculosis or scrofula in a pregnant woman he did not consider a sufficient cause for vomiting, but there could be no doubt that an individual suffering from some chronic constitutional disturbance was in a condition predisposing to reflex disturbances. At least such a patient could not bear the exhaustion from prolonged vomiting as well as an otherwise healthy individual.

The mechanical theory of Graily Hewitt, although ably supported by his own clinical experience and that of others, does not explain all cases. The essayist stated that there was no displacement, in fact nothing abnormal in the uterus of his patient. Nevertheless it is possible that a retroflexion or anteflexion may give rise to nausea and vomiting in the early months of pregnancy. For we occasionally meet with patients having this symptom independent of pregnancy when there is a flexion of the uterus; and that vomiting is caused by reflex action is proven by the nausea and vomiting experienced by some women during a simple digital examination, especially if the uterus be pushed in one direction or the other, or pressure be made on it from above during a bimanual examination, the finger resting on the os in the vagina.

The flexion theory would not account for the later months of pregnancy when the uterus is straightened out, but Graily Hewitt endeavors to explain this late occurrence of vomiting by saying that the tissues of the uterus at the seat of flexion are sometimes left in a diseased state, being stiffened and unduly resistant, and thus the irritation is kept up. The good results following dilatation of the os he also explains in this way: that the flexion of the uterus is thereby removed.

The essayist remarked that no local applications to the cervix were made because there was no erosion or ulceration of the os. The speaker would remind him that local treatment was not recommended for this condition alone, but for the reflex action on the uterine nerves. In obstinate cases resisting medication he would, therefore, resort to penciling the cervix with nitrate of silver or other irritants, whether there was an abnormal condition of the cervix or not. The worst that could occur would be an abortion, and that in itself generally puts an end to the trouble; therefore this latter procedure is also recommended by good authorities in extreme cases. The speaker however, did not consider it justifiable for this purpose directly to induce abortion before the seventh month, but if it did occur accidentally during local treatment when other means fail, the physician could not be held responsible for this accident.

Dr. Julia Carpénter referred to two points in connection with the treatment of this affection.

One was local applications to the cervix whether there was any disease of that part or not. A weak solution of nitrate of silver, five grains to one ounce of water, had been used with success in such cases many times.

The second was dilatation of the external os. This she had tried in one case, but as other remedies were used at the same time, it was impossible to know how much benefit was derived from it alone.

Dr. Trush had encountered no fatal case of vomiting in pregnancy; he had of course had cases of severe and protracted vomiting in pregnant females, but all ultimately did well. Quite recently he had had a patient where the vomiting persisted during almost the entire period of gestation. Enemata of half drachm doses of chloral hydrate, however, and maintenance of the recumbent posture so far controlled the irritable stomach as to enable the patient to retain each day, a very considerable quantity of milk and lime-water; without the chloral even this bland nutriment was also ejected.

In cases of the character reported tonight the question of the induction of abortion deserved serious consideration. Authorities generally, he believed, gave their sanction under such grave surroundings to the measure, though exceptions were not wanting; quite recently a prominent English author had expressed himself to the effect that fatal—"irrepressible"—vomiting in pregnancy did not exist, the natural inference being that the indication for the induction of abortion did not present itself. But surely, after the various known remedies for this trouble had been fairly and vainly tried; the patient retaining no food whatsoever, emaciation progressing rapidly; fever and the peculiar fœtor ex ore of inanition supervening, it was high time to think of evacuating the uterus; the operation he thought was then perfectly proper and legitimate, even if the uterus was not at once relieved of its contents, if only the death of the fœtus could be encompassed, the vomiting would probably cease.

He had long been of the opinion that, being undoubtedly a reflex phenomenon, the vomiting of pregnancy was due in the majority of instances to intra-uterine tension, hence its cessation, almost invariably on the death of the fœtus, the uterus as well known growing decidedly flaccid after the occurrence of this event. In some instances the reflex irritation might arise from a dislocated uterus, or from ulceration or other morbid condition about the os or cervix.

Dr. Palmer said it would be difficult to fairly discuss this case because we are not in possession of all the facts. At the time Dr. Mitchell saw her, rectal alimentation was clearly indicated. It was a method of treatment possessing very great value. If the stomach rejects the necessary nourishment, the rectum was the proper channel of alimentation. It might be resorted to in these bad cases much earlier.

Some foods, in the nausea and vomiting of pregnancy, the stomach will retain. Koumiss he had used with some success. By consulting the fastidiousness and cravings of the patient, some foods may be acceptable where most others are rejected. He had never seen a case of the vomiting of pregnancy which had proved uncontrollable or dangerous.

He did not believe that the disease had any fixed pathology. The nausea and vomiting were symptoms indicative of a reflex action dependent upon variable conditions. At first the stomach is only functionally disordered, but it may, in its mucous membrane, undergo secondary structural changes—congestion and softening. He could not agree with Graily Hewitt that in the great majority of cases there is some uterine dislocation, version or flexion, or that the uterus became incarcerated. But a single fact lent any support to this mechanical doctrine, viz., the fact that most cases obtain a relief, that the vomiting spontaneously ceases in the fourth month of utero-gestation, when the uterus rises from the pelvic into the abdominal cavity. But who has not witnessed severe cases of this disease when the uterus was not dislocated? Who has not seen uterine dislocation in pregnancy where there was no stomach disturbance? The rectification of a version, say a retroversion, in pregnancy does not always relieve an associated vomiting. Nor is the uterus always imprisoned. The vomiting persists in bad cases after the fourth month, when the uterus has more room.

Many times there is some disease of the cervix. Its presence is accidental; it may or may not be the cause. Not unfrequently there is absolutely no disease of the pelvic organs. The symptom is bad soon after marriage, immediately after conception, in some who have previously enjoyed unimpaired health.

Topical applications of various kinds very often relieve the stomach after medicinal treatment has failed, and this is true whether the uterus is diseased or not. The local medicament appears to set up a local irritation, substitutive of the morbid irritation—the principle, it may be of counter-irritation. Now any uterine or pelvic disease may be a local and direct exciting cause of the vomiting of pregnancy, and as such it should be overcome. But we do wrong and are led astray in looking for a certain definite pathological condition underlying all cases. Nor does the pathology of the most severe cases—the pernicious vomiting of pregnancy—differ from the milder ones, except as there be conditions accidental or resultant upon the exhaustion and inanition of a prolonged loss of food. The difference in cases depends upon the difference in constitution—their special susceptibility.

As to the induction of abortion or premature labor, he thought under certain circumstances and proper precautions it was a justifiable procedure. It is indicated when a judicious selection of food, change of abode, administration of medicines, rectal alimentation, and topical treatment to

the uterus, have failed; when, the symptoms continuing, exhaustion threatens and an impending fatal issue. Nor should it be postponed too long; practiced too late, it might not save the patient. It is a procedure always attended with the gravest responsibilities, for we can never be certain that the vomiting would not have ceased without it, nor can we be positive that it will abate when the operation is done, or that the operation may not directly contribute to a fatal result. These risks, however, must be assumed, and the operation must be practiced upon the probabilities of a future outlook of the case.

As to Copeman's method of dilatation, the speaker had had no experience. He had not yet encountered a case in which it appeared necessary. In making this artificial dilation of the os externum, there was a danger that the os internum might also be dilated and an abortion be provoked.

Dr. Hyndman said his experience was limited to a single case, from which he had arrived at no exact conclusions as to its cause, further than that it was reflex. Pencilling the cervix with argent. nit. had given relief in his hands.

He had a peculiar case at present where the woman had taken the treatment into her own hands, and instead of dieting herself, she has resorted to the opposite measure of filling her stomach after each attack of vomiting, and after a time, as she expresses it, she has tired her stomach out, so that a portion of food is retained.

Dr. Thad. A. Reamy said:

I do not believe that cases of uncontrollable vomiting of pregnancy are, as a rule, simply aggravated cases of the ordinary character. Vomiting is, of course, in all cases only a symptom, and may be provoked by a variety of causes. It is a reflex movement, no matter whether the irritation be direct, central or peripheral. It is, in my opinion, extremely probable that in each case of uncontrollable vomiting of pregnancy there is a special cause outside of the ordinary.

Medical men often write and speak as though the cause must be found in the simple fact that the woman is pregnant, or rather that pregnancy is the dominant fact, and then that some special and uniform lesion or state of some organ must form the connecting link. Thus Dr. Graily Hewitt discovers uterine displacement to play the necessary role, Dr. Bennett, inflammation or ulceration of the cervix; Bretonneau of Tours, purely sympathetic; Robert Barnes, stretching of the muscular fibres of the uterus by the growing ovum, an opinion, by the way, which seems to be endorsed to-night by my friend Dr. Trush. Brock believes it to be largely associated with albuminuria, the patient necessarily possessing an idiosyncrasy, the real cause neurotic. The successful results from Copeman's method of cervical dilatation would indicate that in some cases at least the difficulty is local, being confined to the cervix. On this point I shall have something to say from my own personal experience later on.

Unphilosophical and fallacious reasoning upon the subject, to my mind, as already stated, consists in trying to find a common cause.

In the present state of knowledge upon the subject, the theory of reflex irritation, which is most generally received, is the most plausible, and until something better is offered I should myself feel bound to accept it. But acccepting it, nothing could be more unreasonable than to conclude that the point of peripheral irritation or the cause of that irritation must be uniform.

With certain individuals there is normally greater impressibility of the nervous system than with others. It is the common observation that pregnancy usually increases nervous impressibility beyond normal of the individual.

It is more than probable that many of the nervous ganglia are enlarged as a result of the pregnant state. This is especially true of the hypogastric plexus and of the ganglia in immediate relation to the uterus. Modern physiological investigation fixes one of the important motor centres for the muscular structures of the uterus in the medulla, at least near the floor of the fourth ventricle.

Vomiting requires the action of the diaphragm, the abdominal walls and the muscles of the stomach. Movements of these muscles are coördinated by a nervous center in the floor of the fourth ventricle, very intimately related to the respiratory center. Motor impulses are sent to the abdominal muscles, stomach, œsophagus, and diaphragm by the intercostal, phrenic and pneumogastric nerves. The vomiting center is excited by irritation of certain afferent nerves. Sensory nerves of the stomach are branches of the vagi and also of the sympathetic. But since vomiting may occur after section of the vagus, the demonstration is conclusive that it is reflex.

Vomiting occurs in many cases of acute and in some cases of chronic congestion of the liver. The passage of gall stones not only causes pain of the most atrocious character, but vomiting which is sometimes uncontrollable. Physiology shows that vomiting, under such circumstances, depends upon the fact that the nerves supplying the liver and gall ducts are branches of the vagus and sympathetic. Irritation of these nerves causes, under such circumstances, the vomiting. Intussusception or strangulated hernia, or peritonitis are well known causes of vomiting. I have scarcely ever seen a case of well marked acute ovaritis where vomiting was not present. The same is frequently true where there is severe irritation of the renal nerves. These are all cases illustrating the influence of irritation sent from remote points to the vomiting center.

Anatomically we have just the same reasons for expecting vomiting from irritation of the uterine plexus; clinically the proof is that reflex vomiting under such irritation is perhaps most common of all illustrations

of the kind. Pregnancy in all its stages furnishes the conditions for this irritation.

Lauder Brunton (*Practitioner*, Vol. xiii) has called attention to the fact that of the afferent nerves which excite the vomiting center, there are two classes: 1. "Those which pass upwards from the body to the medulla, and 2, those which pass downwards to it from the brain."

The nerves of taste and smell act only on the vomiting center through the brain. In the pregnant woman, taste is often capricious, and the sense of smell is often unusually acute, vomiting occurring should she get the odor arising from the cooking of certain dishes. These are illustrations of the increased impressibility and irritabily attendant upon the pregnant state.

It is the common observation but nevertheless pertinent in this discussion that the vomiting of pregnancy occurs in a larger per cent. of cases prior to the fourth month, still it is not unfrequently a prominent symptom during parturition, occurring toward the close of the first stage of labor, especially in the primipara. Here it is likewise a reflex act propagated by irritation of uterine nerves consequent upon the process of cervical dilatation.

Vomiting is especially apt to occur under the slightest provocative cause, whether in the pregnant state or not in scrofulous subjects. It is quite a common symptom in chlorosis, still more common in anæmia. In these cases it is the result of mal-nutrition.

Protracted vomiting from any cause, and especially during pregnancy, of course interferes with nutrition and lays the foundation for anæmia, in a milder or more aggravated form, so the scrofulous diathesis interfering with the lymphatic system may sometimes lead to the same condition, though digestion may seem to be carried forward in the most perfect manner. In a certain proportion of these cases gastric catarrh of a severe character must necessarily be developed; in some cases it is a consequence of the vomiting. Being established, it may become the cause of the continuance of vomiting.

In this view we may find an explanation of the marvelous influence for good attendant upon stomach rest and rectal alimentation in the second stage of the pernicious vomiting of pregnancy in certain cases.

In these examples it is quite probable that serious disease of the stomach exists, although it does not follow that this is a primary lesion.

Cazeaux reports a case where a woman two and a half months pregnant died of what was regarded as the irrepressible vomiting of pregnancy, the post mortem revealing organic disease of the stomach, sufficient to explain the symptoms and account for the death. The same author reports another case supposed to have been the vomiting of pregnancy, but the autopsy revealed tubercular peritonitis, accounting for the cessation of

menses, the abdominal enlargement, the vomiting, the death, the patient not being pregnant.

I knew quite well the lady who was the subject of the report made this evening by Dr. Mitchell. She was for some years prior to her marriage an occasional patient of mine, she then being a resident of this city. There are some facts as to her diathesis which I regard as being suggestive if not significant. She was of a pronounced scrofulous diathesis. She was apparently well nourished, but was not, being anæmic. On different occasions, covering over a period of two or three years prior to marriage, she suffered of ulcerative stomatitis, with spongy gums. On one occasion I remember there was well marked glandular enlargement about the maxillary angles, also within the mouth, attended with copious ptyalism. These symptoms were sometimes persistent and almost intractable. There was no specific history, nor had she taken mercury.

It so happens that in several other patients coming under my observation suffering of obstinate vomiting during pregnancy, the same dyscrasia existed. In this case it is certainly worthy of note that when Dr. Mitchell saw the patient she was not only greatly emaciated but had a very sore mouth.

I called attention in these remarks to the increased sensitiveness of the pregnant woman to odors. Harwitz of St. Petersburg has laid special stress on this symptom, called *hyperosmia* as a cause of the nausea, and I have myself also noticed several examples.

In two cases that I recall in my practice, where there was retroversion, the adjustment of a proper pessary was followed by prompt arrest of vomiting, which had proven obstinate. In several others wherein the same displacement existed, no relief whatever followed correction of position by pessary. In one case of anteversion associated with vesical irritation and obstinate vomiting at second month of gestation, prompt relief followed insertion of an anteversion passary.

In one case occurring several years since where there was neither version, flexion or prolapsus of the uterus, prompt relief from vomiting followed the insertion of the rubber-covered watch-spring ring pessary, the only action of which encircling the cervix, was tension outward in all directions, made at the cervico-vaginal junction.

It is my opinion that the influence of such practice upon the mind of the patient may sometimes explain the cure, and therefore that the mechanical force exerted upon the uterus, or influencing its position exerts no directly curative agency. Many authors have called attention to cases where violent mental emotion has arrested at once, vomiting of the most aggravated character.

In several instances occurring in my practice the vomiting of pregnancy has been arrested by the application of compound tincture of iodine with

carbolic acid, solution of nitrate of silver, and other remedies of this class to the os and cervix; in each of these cases there being well marked inflammation, erosion, etc.

Our distinguised countryman, the late Dr. Sims reported several such cases occurring in his own practice. These cases sustain, to a limited extent, the views of Dr. Henry Bennet. They do not however sustain the extreme views held by that distinguished observer: only showing that probably in certain cases, disease of the cervix plays an important role, and pointing out the propriety of proper treatment to such diseased os, when it is detected. In this connection it is proper for me to state, that in two or three instances where erosion existed, relief was not followed by topical treatment.

Since 1872 I have practiced the method of cervical dilatation in these cases. So early as 1874 in my clinical lectures delivered at the Good Samaritan Hospital, the reporter's notes of which lectures are in my possession, I referred to a case in which dilatation of the external os by the finger was followed by arrest of the vomiting. In this case the patient had complained of pain in the cervix. She was pregnant three months. A digital examination showed unusual induration of the cervix with an apparent band of constriction which I now suppose to have been due to inflammatory changes just within the os externum, constricting the cervical canal. This constriction yielded after considerable effort to the introduction of my finger. In several cases from that time up to '78; when Dr. Copeman's paper appeared in the *British Medical Journal*, this method was practiced in my hands, and its results referred to in my lectures and discussions. But to Dr. Copeman, unquestionably belongs the credit of giving in a substantial form, to the profession, this valuable method of arresting vomiting in a certain proportion of cases. Its value is now so fully attested that it is no longer a question of dispute. The error fallen into by many, consists in employing it in every case, which, to my mind is clearly a mistake. My own experience with the practice will cover about thirty cases. In four cases where I have employed it, gestation had existed from four to four-and-a-half months. In two cases, six to six-and-a-half months. In three cases, occurring within the past two years, I have dilated with an instrument. In one, premature labor followed. In about two-thirds of my cases the practice has been completely successful. In one-third, no good has followed it. During the past three years I have not employed it except in cases where I recognized the absence of the normal physiological cervical softening of gestation.

In an able paper upon "vomiting in pregnancy," by Dr. W. Gill Wylie (*N. Y. Med. Rec.*, Dec. 6, '84), in which dilatation by the finger and instrumentally, is strongly commended and sustained by the citation of cases, the following language occurs: "Morning sickness to a moderate

extent may occur without any perceptable disease of the cervix, but as a rule it is a pretty certain indication that there is an unhealthy condition of the neck of the uterus."

My observations do not justify my concurrence fully in the above statements of Dr. Wylie, for I have certainly seen cases of irrepressible vomiting where no disease of the cervix could be detected, and as already stated have not found relief to follow local treatment in such cases. Nevertheless, there can be no doubt of the truth of Dr. Wylie's statement as to a considerable proportion of the cases, occurring either in private or hospital practice. And I fully concur in the soundness of the recommendations of this gentleman, that thorough examination of the cervix should be made in every case of irrepressible vomiting, and local treatment or dilatation should be employed in cases where the condition justifies it. Normally, the cervical softening is well inaugurated by the end of the second month, involving the external portion. By the end of the fifth month, the whole cervix is involved in the softening process. Laceration of the cervix in previous labors, granular erosion, chronic inflammation of the cervical mucous membrane and many other pathological states may prevent this softening. Dilatation by the finger under such circumstances not only overcomes the resistance, and therefore removes temporarily the nervous irritation which makes this the focus for distribution to the vomiting centre, but it sets up a process which ultimately results in softening. Thus we have therapeutic results sustaining the correctness of these views as to pathological changes.

Several of the speakers have intimated that, in the case reported to-night, artificial abortion ought to have been resorted to. A sufficient reply to this is that, during the time this patient was on rectal alimentation and stomach rest her symptoms improved. Certainly an abortion under such circumstances would not have been justifiable.

When we hear of the case again, the symptoms are so grave that it is not at all probable emptying the uterus would have saved life. During the intermediate stage, after the symptoms were severe, but before the fatal symptoms presented, was, of course, the only auspicious time (if such a time can be admitted) for this procedure. It is to be remembered, however, that this favorable time is not always easily recognized; and, as stated by the reporter, the period of gestation was rapidly approaching, when vomiting ought to have been expected to cease spontaneously.

Again, gentlemen speak as though emptying the uterus under such circumstances is certain to afford relief to the woman; the procedure, therefore, is only to be deplored because of its destruction of the child. Nothing could be more fallacious. Even this dreadful expedient is not always successful for the mother.

The statistics of M. Guéniot, quoted by Tarnier, and referred to by the reporter to-night, show that in 118 cases there were 72 recoveries and 46

deaths. Recoveries following spontaneous abortion, 20; after abortion or induced labor, 21. Deaths without abortion, 28; after abortion or spontaneous premature labor, 7; after a procured abortion, 11.

Dr. Alfred McClintock, in a paper before the Dublin Obstetric Society, read in 73 collected statistics of 50 deaths. This author showed that in 36 cases in which abortion was induced there were 27 recoveries and 9 deaths. So we see that even for the mother this remedy is not infallible.

As to treatment, my friend, Dr. Busey, of Washington, D.C., has obtained excellent results from rectal injections of bromide of potassium or bromide of potassium and chloral. My own experience with the remedy has also confirmed its value. The promptness with which violent or excessive *after pains* are relieved by rectal injections of chloral, might indicate the *modus operandi* by which this treatment quiets the vomiting of pregnancy.

In conclusion: The causes of the irrepressible vomiting of pregnancy are not the same in all cases, but widely different in different cases. Each case must be studied by itself, and the treatment varied accordingly.

Dr. Illoney: Not having heard the report of the case under discussion I can have nothing to say about it. I must, however call the attention of the Society to a point made by the eminent gentleman who has just spoken. In the course of his remarks he says that we do not sufficiently distinguish in discussion between ordinary vomiting occurring in pregnancy and the pernicious vomiting occurring in the same condition. They are separate and distinct from each other. the pathology and etiology of the latter being altogether different from that of the former.

This broad assertion, with all due respect to the gentleman making it, has certainly, in my opinion, no foundation. It cannot certainly be denied that all vomiting, unless produced by direct mechanical irritation of the stomach, is due to reflex action.. I have seen many cases of vomiting from brain lesions, from diseases of the kidney, from intestinal obstruction, from odors, from taste, from faucial irritation, in pregnancy, and in all by direct irritation of the nervous system as occurs in cerebral troubles, by odors, or taste or by a more complicated process, as in blood-poisoning from some distant lesion, the mechanism of the vomiting produced is the same; it is reflex action; and whether this vomiting be moderate, occasional and without any dangerous consequences in itself, or whether it be persistent, unceasing, and foreboding dire results to the sufferer, the mechanism is still the same. The only difference is in the severity of the irritation producing the reflex act. It seems to me, therefore, that the ordinary vomiting of pregnancy and the pernicious vomiting of this state are the same in their pathology and etiology, there being no ground for the assumption of difference, the only difference between them is in the degree of severity. I hold that the term 'pernicious' is not used to denote a peculiar kind of vomiting, but is used to describe the effects on the patient

of the excessive vomiting. Because a woman is strumous is no proof that the strumous condition is the cause of the excessive vomiting, for no doubt everyone has seen strumous women, even tuberculous women, go through pregnancy without vomiting at all, and certainly without pernicious vomiting. That the strumous condition may make the vomiting more dangerous to the woman, no one can or will deny, but that it is the direct cause of the vomiting no one, I think, will uphold.

But the great question for the practitioner has as yet been nowhere defined: when can the vomiting be called pernicious, and demand direct, immediate and energetic interference on the part of the medical attendant? When may we assume that the life of the woman is being endangered? I had a case of severe vomiting accompanied by high fever, which I would have called pernicious had it not been that in the evening always the patient was able to take and retain a very hearty meal. I have heard from practitioners of other cases where the pregnant woman could take a hearty meal in the course of the morning or at noon. I would therefore call a case pernicious *if the patient can at no time during the day tolerate food upon her stomach.*

As to the question of Dr. Cleveland, whether abortion would be indicated for the relief of the patient suffering from pernicious vomiting, I would say that so far as I am concerned, should the necessity arise, that would be the measure I should resort to and the one from which I would expect the greatest benefit.

Dr. Trush said that Dr. Reamy had been at some pains to show that vomiting might arise form a variety of causes, and was especially prone to occur in anæmic and chlorotic girls. He (Dr. Trush) thought all would admit the truth of this statement, still even the chlorotic or anæmic young woman was not apt to suffer from "*irrepressible*" vomiting until she became pregnant, until this peculiar uterine irritation had been set up. The objection to the "tension" theory that, if true, the gastric disturbance ought to continue *as did the tension*, during the entire period of gestation, and not merely during the first three or four months as was usual, he believed was well taken; at the period of gestation mentioned the uterus had risen out of the pelvis, and hence was no longer hemmed in by rigid walls; it was also now rapidly growing much softer and more flaccid, factors, both of which he felt convinced, were attended, as a rule, with reduction of the intrauterine tension. He did not wish to be understood, however, as claiming that "tension" was universally the cause of the vomiting, nor that death of the fœtus would invariably afford relief, he simply wanted to say that this was true of the large majority of cases; if dilatation of the rigid os externum, for instance, proved successful in arresting the vomiting the success could not be ascribed to a reduction of the intrauterine tension as no such change could be presumed to have resulted from this procedure, neither could the salutary results which had

been known to follow upon the application of the nitrate of silver to an abraded os be explained in this manner; the essential exciting cause of the vomiting manifestly was not always the same, and hence no single remedial measure would invariably prove successful.

Dr. Miles said he had met with some troublesome cases of this affection but none that had resulted in death. He had seen one very severe case in which the vomiting recurred during the last two months of gestation. She was confined to her bed and was so much emaciated that bed sores had made their appearance on the shoulders and hips. The stomach was very irritable, so that little nourishment was retained. He applied a fly blister over the stomach and the vomiting ceased and the patient was carried through the period of gestation.

He had seen to-day three cases of this disease. Two had miscarried previously on this account, and one was likely to again. The three cases examined to-day were similar, being in the third month, the uterus very tender, the cervix tense, hard and contracted, also the surrounding tissues tender. How much of this disturbance is due to the surrounding irritation and how much to the uterus itself he did not know, but believed it due to the seeming contracted condition of the cervix. Dilatation in these cases he feared would do harm by setting up an inflammation and result in abortion.

He had ordered warm water injections and had applied tampons saturated in glycerine to the cervix, which relaxed the parts and afforded relief.

He thought ulceration and granulation of the cervix was productive of vomiting in an excessive form. Local applications here undoubtedly did good.

Dr. Mitchell in concluding the discussion said he had seen this patient but twice. Her condition at the time of his first visit was as described, axillary temperature 102½°, pulse 126, marked emaciation and inability to retain any food. He had suggested the induction of premature labor, and it was freely discussed in the presence of the husband. But since I could not give him positive assurance that it would be followed by restoration to health, both he and his wife objected to such an extreme measure.

Furthermore, the patient was approaching the end of the third month of her pregnancy, a period when vomiting often ceases spontaneously or becomes less severe. Rectal alimentation was resorted to, and the patient made marked improvement until it was discontinued. Speaker thought it indeed difficult to determine when the benign form ends and pernicious begins, since in almost every case of irrepressible vomiting of pregnancy the first stage differs in no respect from the simpler form. He believed the remote cause of the disease to depend upon inherited peculiarities of constitution, and that the pregnancy was only the exciting

cause. It is, strictly speaking, one of the neuroses; and like puerperal insanity has no known pathology. No revelations are made by the post mortem examinations of those who have died from it. The lesions found are simply coincident. Speaker regards pregnancy as the great physiological test of mental and bodily soundness.

Since the patient died and labor was not induced, it is easy to say the pregnancy should have been terminated, but at the time of my first visit, to know that which was best to be done was not an easy task. We did what was in our judgment proper and right to do. The question as to whether emptying the womb would have saved life can not be answered. The induction of labor in a woman markedly emaciated and debilitated and with a temperature of 102½° is certainly an undertaking of great gravity.

SUFFOLK DISTRICT MEDICAL SOCIETY.

Obstetric and Gynecological Section.

Meeting of December 17, 1884.

Dr. James R. Chadwick, President, in the Chair.

Dr. Z. B. Adams, of Framingham, Mass., read by invitation a paper entitled

Grounds for Objecting to the Routine Use of the Vaginal Douche in Normal Childbed.

I have chosen, and thus formulated, my subject for two reasons: First, because I wished to excite discussion of an important question which could be fully introduced in a short paper; and second, to bring forward matter especially interesting and, as I believe, valuable to country doctors.

I am in the constant habit of employing monthly nurses drawn from the city, and it is probable the same practice is followed by others. Country nurses are not to be relied upon, and only very rarely are they entirely devoted to, or thoroughly trained in, the occupation of nursing, so that they are of little real use in the lying-in room.

Lately I have been annoyed to find that these city nurses required watching to prevent the indiscriminate and unauthorized use of the vaginal douche during the parturient week. They come equipped with the clinical thermometer, the catheter, the gored binder, the breast-pipe, and, lastly, the syringe and its accessories, all of which they proceed to use as if a matter of course. How soon we shall have added the endoscope, the sphygmograph, the stethoscope, and a case of surgical instruments, I do not know. To none of the material of the present armamentarium do I see any valid objection; indeed, I highly approve of all these things, not excepting the syringe, provided they are intelligently used. But when I see these nurses preparing to use the syringe for the

purpose of douching the vagina of a perfectly healthy parturient woman without saying by your leave, it seems to me proper to enter my protest, and so I do. The nurse who has taken the temperature and recorded it, noted the pulse and perhaps the respiration, adjusted the binder, attended to the function of the bladder, washed and dressed the baby, etc., etc., all without special direction or attention on my part, now looks up in surprise as if I were unwarrantably interrupting the performance of the usual offices of childbed when I ask what she is about to do with that syringe. And when I absolutely forbid its use for the purpose indicated I am treated as though I had expressed grave doubts about the Copernican theory of our solar system. Now it is clear that especially in the lying-in room nothing should under any circumstances be permitted which may disturb the confidence of the patient, the family, or of the nurse, in the competency and skill of the physician. And yet I have had to bear to be informed by the nurse in the presence of the patient that in the lying-in hospital where she had her training the vaginal douche is invariably used in every case, and that Dr. A. and Dr. B.,—respected members of the obstetrical society,—for whom she had frequently nursed, always expect her to use it as a matter of course, and without being directed to do so. She has heard of doctors who do not approve of it, but cannot remember their names.

Seriously, then, I find a threefold objection to the use of the vaginal douche in normal childbed. First, it is useless; second, it is hurtful; third, it is dangerous.

1. Uselessness. In this part of my subject I find myself forestalled by two writers in a recent number of the *New York Medical Journal*, and I shall not hesitate to quote from these papers. The first is theoretical, and is entitled "Normal parturition always physiological," by Dr. Ernest Palmer, of Brooklyn, N.Y. The advanced school of obstetricians hold that gestation and parturition are "more or less physiological conditions." This Dr. Palmer denies. He takes from Leishman's Midwifery a description of the vagina and cervix during labor, and describes the nature and use of the profuse mucous flow at that time. He says: "Upon the quantity of these secretions the ease of the labor undoubtedly depends in no small degree." Now we are directed by the antiseptic school of midwifery to wash away these secretions upon the presumption that they furnish a nidus for, or may prove a source of septic infection. "In other words," says Dr. Palmer, "removing an important physiological factor from a normal delivery to prevent a possible pathological complication." After the labor the antiseptic midwife or physician continues to act upon a similar fallacy. "Prophylactic vaginal douching and medication with iodoform is at once resorted to," to prevent absorption of some supposed poison or infectious matter through the lacerated mucous membrane of the vagina or cervix, or by the presumed denuded tissues of the uterine

cavity itself. Absorption of what poison or infectious matter? To wit, the lochia, consisting of a thin bloody fluid weeping from the site of the detached placenta, combined with products of a retrograde metamorphosis of tissue entirely physiological in character. He shows, moreover, that "the supposed denuded muscular tissue of the uterus is a condition which has no existence." Dr. Palmer says: "Uncomplicated labor is a purely physiological act, for which ample preparation has been made in the system to provide for the increased demand made on it, and to guard against all the ordinary incidents pertaining to that function." He enters a firm protest against the antiseptic douche as being established on misconceived theories of pathology and in direct violation of the physiological laws of reproduction, being both unnatural and irrational. Now, if Dr. Palmer's view is the correct one, the practice of douching the vagina in childbed is no more defensible than would be the practice of giving antiseptic clysters to prevent infection from fecal matter; and it is well known that septicemia from wounds or fissures of the anus is one of the very rarest of accidents.

Moreover, there is high authority for the opinion that the lochia depend upon a condition in every respect analogous to what occurs in menstruation, namely, "an exfoliative shedding of the mucous membrane of the uterus." Leishman says that at no time is the normal discharge of the lochia "in any way analogous to the suppuration which accompanies the reparative process of a healing stump." Dr. Tyler Smith, as quoted by Dr. Palmer, says that the analogy is perfect between the menstrual fluid and the lochia. I think no one of my hearers would think it wise to introduce the practice of douching the vagina during menstruation in every female. Yet, according to Dr. Palmer, this is about what we do when we are washing out the vagina in a healthy parturient woman.

Per contra, in an address lately delivered by Dr. T. Gaillard Thomas before the New York State Medical Association, he says: "Although the obstetricians of to-day are not prepared to make aseptic midwifery the rule, it is highly probable that in the near future this position will be accepted." He compares it to the antiseptic surgery of amputations and of laparotomy. Such views from one who stands as Dr. Thomas does, in my opinion, *facile princeps* among American gynecologists, cannot fail to make a humble pupil pause and look warily over the ground before proceeding farther. I would ask his pardon for daring to present an adverse view of this question. It should be remembered, however, in excuse of my temerity that Dr. Thomas speaks from the standpoint of the gynecologist and not from that of an obstetrician. We believe that all diseases are only so many modifications of the healthy condition. But is it true that the parturient state is such a variation from health as we ordinarily mean in speaking of disease? Now this question is altogether too profound and too intricate to be slightly treated in a twenty-minute paper.

Indeed, it is doubtful if any fine line can be drawn showing when in the course of imperceptible gradation health ends and disease begins. But there is an abstract position which we may be permitted to occupy upon this matter. Is it likely that of all organic functions that upon which the continuance of species depends, and which is common to all animal life, should be the one which acts only under conditions tending to decay and death; that is to say, under conditions of disease? Is it not, on the other hand, probable, *a priori*, that this function, *in every one of its separate parts*, is especially guarded against those accidents which produce disease? That nature should seek to continue, and yet use means that by reason of defect may hinder or disturb the continuance of a race or species, is simply incredible. Nor can it be argued that, in the case of mankind, civilization, or abuse of function, or an effort of nature to prevent over-production, or other supposable cause, is operating to confuse or pervert the order of things. I think, then, we assume that there can be no real analogy between normal parturition and what takes place after amputations or laparotomies. And if there be no analogy between these conditions, what grounds have we to act upon similar theories or to employ similar methods in their treatment? So much for theories.

But all such arguments are idle if it can be shown that in clinical practice the use of the vaginal douche will cut short or prevent the spread of puerperal fever, peritonitis, or septicemia in hospitals. And here I find one of the strongest arguments to prove the uselessness of the practice under consideration. It is, I believe, a fact that the employment of the vaginal douche does not prevent the occurrence of the diseases in question in those institutions where it is in constant use. But does it prevent the spread of infectious diseases? To prove this we should have cases treated side by side at the same time and place by the two methods. Satisfactory evidence of this kind is not at hand. But I will ask you, gentlemen, to say if any of you would have the slightest confidence in the vaginal douche, however thoroughly used, to stamp out puerperal fever, should it occur in a hospital under your control. And if this method is useless in lying-in wards, of what possible good can it be in private practice, where the mortality from child-bed diseases is four or five times less, according to the statistics of Winckel?

And in this connection I will quote from Dr. Charles Jewett, of Brooklyn, N.Y., Professor of Obstetrics and Diseases of Children in the Long Island College Hospital, whose paper is also in the *New York Medical Journal*, for November, 1884. He says that his recent experience has led him to abandon prophylactic injections as a routine practice in the puerperal period. In 1883 two parallel series of hospital cases were treated side by side by his direction, one with and the other without the douche. There were twenty-nine cases in all, sixteen douched, thirteen non-douched. One to 1000 bichloride solution was the principal

disinfectant employed, three to five per cent. carbolic solution being used in a small proportion of the cases. These injections were administered by competent trained nurses, and were repeated at least twice a day during the post-partum week. The mortality was less in the non-douched than in the douched. This is not much, but as far as it goes it proves nothing in favor of the douche. For a time also all wounds or injuries occurring during labor were carefully treated with antiseptics, but even this method was at last abandoned, Dr. Jewett's confidence in the value of the practice being shaken by his experience. He says it became clear to him that this treatment was of no effect in preventing puerperal fever. So much for the clinic.

Pathology gives no support to the use of the vaginal douche. On reading the records of autopsies in cases of puerperal peritonitis I discover the fact that in the greater number of cases the uterine cavity and the vagina are found to be in a healthy condition. Can it, then, be maintained that any importance attaches to antiseptic douching of these parts? In a case of acute peritonitis in a young child, lately reported in the *Medical and Surgical Journal*, the closed cavity of the peritoneum contained an odorless fluid *which was filled with micrococci*, according to the evidence of Dr. H. O. Marcy, who examined it carefully under the microscope. Is it not, indeed, admitted by the best authorities that the micro-örganisms which are recognized as the ferments which give origin to purulent infection, puerperal fever and septicemia, in many cases find their entrance into the body of the parturient woman by other avenues than the generative tract? I will only refer to the valuable papers of Dr. Kinkead, of Dublin, in the July and August numbers of the *Obstetrical Journal* of 1884 in support of this opinion. And if it be so, I ask again of what use is the vaginal douche?

There is yet another proof of uselessness in the "method," to which I shall shall refer when speaking of hurtfulness.

2. Hurtfulness. Meigs says in his "Midwifery": "There is in natural labor no element of disease," and, therefore, the old writers have said nothing truer nor wiser than that "*a meddlesome midwifery is bad.*" The method of douching the vagina substitutes an artificial for a natural problem. It is meddlesome, and therefore it may be hurtful, midwifery.

If septicemia be at times autogenetic, which I by no means deny, I should like to ask any practical observer if the frequent washing with water (carbolized or not), of rents, or tears, or abrasions, of mucous membrane does not delay and interfere with the process of union of such parts. That is certainly my own experience. If this is so, this douching is hurtful by prolonging the period of exposure to autogenetic infection. Again, it is hurtful by causing *pain and annoyance*, more or less in every woman, but in nervous and irritable subjects enough to forbid its frequent use. This, again, is "meddlesome midwifery."

But the hurtfulness upon which I would chiefly insist is of a much graver character, and inheres in the method itself.

It cannot escape notice that great importance attaches to giving the management of the douche into the hands only of trained, competent and careful nurses. Now Dr. Thomas, in the address already referred to, speaking of antiseptic midwifery, says: "That it can do no harm is quite evident." It is to be regretted that the doctors themselves should not know all that the nurses seem to know of the occasional experience in giving these douches. Are many physicians aware that at times the water injected does not flow out in a steady stream, but is suddenly and violently ejected in jets? That pain and spasm of the uterus occur? More than that, sometimes only a part of the water escapes at the moment, but, after perhaps an hour or two, there is a sudden and violent gush. Who can doubt that in these cases the water has entered the uterine cavity, of course carrying with it effete and decomposing matter found in the vagina, and which has been already expelled from the uterus? I ask what is to prevent the entrance of water when the os uteri is patulous?

And what harm can be done by an unskilful or careless nurse using the douche incautiously? The tube may enter the uterus, air may be injected, or too much force may be used. Of the first two I shall say little, as I believe them to be avoidable accidents; but the last is, I think,—to use Carlyle's phrase,—humanly impossible to avoid, except on conditions which render the douche futile as a means of detaching or removing clots and *debris* from the relaxed and rugous vagina. The doing this work with any thoroughness requires that some force be given to the current of water. And here I see another proof of the uselessness of the method, since a mere trickle or feeble stream can accomplish nothing, unless almost indefinitely kept up. And what is it we require of a skilled nurse? Let me suppose a case. A faithful woman has given the douche, say two to four times daily for a week; she has been somewhat severely tried by want of sleep and care of an exacting patient and infant night and day; at last, on the seventh day, when attempting to use the syringe, she finds that there is some obstacle in the way, the tube catches in a fold of mucous membrane, perhaps is entangled in a clot or shred of decidua, and she gives the bulb an impatient squeeze. When, under such conditions as I have here described, any grave accident occurs it seems to me cowardly and idle to lay the blame upon the nurse. It should be put where it properly belongs, namely, upon the practice itself.

It is unnecessary to point out the harm that may thus arise from injecting the uterus from the vagina. It is an unhappy accident. And this brings me to the

(3) Danger. I will cite an actual case, giving no names. A young woman in full and vigorous health, a fond and devoted wife, a mother for the first time, a proud and happy husband and father—this was the family.

On the morning of the seventh day after delivery everything was going on perfectly well. The doctor considered the case finished. The wife had parted from her husband after breakfast, and he had gone down town to business at her request, to stay until night. At 10 a.m. she sent him a telegram telling him not to come back at noon, she felt so perfectly well. This was the situation. Shortly after this telegram the nurse, who had by direction of the physician given the vaginal douche at least twice daily since confinement, prepared her syringe as usual. While the injection was flowing into the vagina the patient suddenly uttered a shriek, "Oh! what pain! What have you done to me? I shall die, I shall die!" She turned pale as death, gasped as if suffocated, her lips became livid and she writhed in agony. This is the picture as given soon after by one of the family. The doctor and the husband were sent for, but she sank into unconsciousness, became convulsed, and was dead before evening.

I have it from our lamented pathologist, Dr. Calvin Ellis, who was present at the autopsy, that air was found in the veins and heart.

There is no member of that family, and none of those who saw the case who, as I believe, entertains a doubt that the use of the douche was the cause of death; the *antiseptic douche*, of which Dr. Thomas says, "That it can do no harm is quite evident." The nurse, I understand, admits that she used more force than she intended to use. The doctor, a woman, blames the nurse. This is ungenerous and irrational. The danger inheres in the practice itself.

Since I began the preparation of this paper I have heard of a case in the practice of a neighboring physician, similar in many of its features to the one just related, where however the final result was not reached until the fortieth day, the patient dying of septicæmia. The doctor, who did not see her at the time, says that he does not know that the douche was the cause of death. Cases are known of collapse and shock following the use of the douche.

It is doubtless true that death is exceedingly rare from this practice, but we do not hesitate to reject chloroform as an anesthetic on no better grounds than this.

I would thus sum up my objections to the antiseptic douche in midwifery: It is artificial; it is meddlesome; it is of doubtful utility, and it may be hurtful and even fatal.

DISCUSSION.

Dr. Richardson said that he taught that the vaginal douche should be used. He has never had any difficulty in using, or bad results following the douche.

Dr. Marcy stated that he concurred with the reader regarding the limitations given to the use of the douche. He considered parturition as a physiological process, and in normal labors nothing was required beyond strict cleanliness—surgically speaking, an aseptic condition. This, for

many years, he had endeavored to obtain, and for better protection had used in a routine way napkins moistened with a solution of carbolic acid, and changed often. He had also used iodoform considerably. If decomposition occurs *within* the vagina, then a pathological state ensues and vaginal douches of antiseptic character are requisite. Although the vagina and uterus are excellent incubating chambers for rapid germ reproduction, when infection has taken place, the normal outflowing current is in itself a natural protection from implantation of bacteria, since they are always passively carried in the infected fluids in the direction of the least resistance. This is the probable reason why in normal unassisted labor the uterus and vagina remain aseptic, although marked decomposition has occurred in the secretions about the external ergans where atmospheric exposure ensues.

Dr. Pineo remarked that during nearly forty years of obstetric practice he has not used the vaginal douche after normal labor; and freedom from untoward conditions had been almost exceptional in his experience. He had seen nothing of those conditions said to arise from bacilli and micrococci, and he had grave doubts of the malignant character of those germs which had been so fearfully pictured to the world. He should avoid the use of the douche unless it was called for by unhealthy conditions.

Dr. Abbot expressed his cordial agreement with the reader regarding the use of antiseptic vaginal injections after normal labors. In his experience years ago as a dispensary physician, during two years and a half he had never seen a death from any form of inflammation following labor, even when it had taken place under the most unfavorable hygienic surroundings. The medical profession is almost compelled now-a-days in obstetric matters to accept the rules laid down by gentlemen whose experience has been mainly gained in lying-in hospitals, where the patients are placed under very different conditions from those in private practice. He had himself employed vaginal injections, after normal labors, in only a few instances, and of late had not used them at all. It should be remembered that in cases of threatened danger from post-mortem septic inflammation the relief obtained had been from *intraüterine*, not *vaginal*, injections. Indeed, so high an authority as Dr. Robert Barnes has said that in all puerperal woman the uterus should be washed out once or twice daily for a week after confinement with a solution of carbolic acid—a recommendation which he felt safe in saying had not met with much favor with the medical profession.

Dr. Reynolds said that he regretted the repetition of a statement which he believed to be untrue, that, *of necessity and inevitability*, the aggregation of women in lying-in hospitals involves a high percentage of death. No where, except in these hospitals, can the thoroughly competent accoucheurs that every community so urgently needs receive adequate

training, and in the absence of any such refuge crowds of suffering women are in all populous centres left practically without relief. As a matter of fact, the assertion is not true. The inmates of the Rotunda in Dublin fairly represent the classes most likely to suffer in childbirth. Dr. Macan, in an admirable report just published, shows the total mortality of that hospital for the past year to be only one half of one per cent. We have equally encouraging results from St. Petersburg and from other quarters. Of what value, in offsetting these facts, is a *résumé* of hospital experience for the last fifty years in places of every sort, good, bad, and indifferent? The public, no less than the profession, are entitled to have this proposition flatly denied as often as it is repeated. He heard with amazement the "physiological" argument, as to the impropriety of cleansing mucous surfaces. Wash well the vulva, but consider the risk of purifying the vagina. Take care that no brush enter the mouth; though a man may with safety bathe his lips. The reader discourages washing out the uterus, because, in many instances, disease goes on afterward unchecked. This may well be true. Septic infection has often other points of entrance than the lining membrane of the uterus; so that the most faithful cleansing of the cavity must many times do no good. In cases of another variety every threatening symptom promptly subsides under the use of these measures. Not long ago Dr. Matthews Duncan reported an illness where, in spite of watchful and judicious care, an alarming condition was long maintained, to disappear as if by magic when he detached from the fundus with his finger a seemingly insignificant scrap of membrane, not longer than a florin. Dr. Reynolds believes in strict cleanliness after labor as emphatically as he does in preventive management of woman about to be confined. It is often impossible to ensure the careful washing of the vagina, but he rejoices whenever he has the luck to obtain for this duty a capable and intelligent nurse. He has not yet seen either injury or suffering from this practice. Nearly every woman expresses her consciousness of comfort given by it. He never allows himself to direct such washing without forbidding any force in the administration. Instances of abuse of a remedy surely do not form any argument against its proper and legitimate employment.

Dr. J. S. Greene, of Milton, said he was not a decided partisan on the subject of douches. From his standpoint of a practice in a healthy suburb, and having an inclination not to be meddlesome, he ordinarily did not use douches after normal labor. He did not hesitate, however, to use them in such cases as presented grounds for suspicions of morbid tendencies. He had not seen harm result from douches, but had reason to believe that he had seen them serve as valuable aids in securing the safety of patients.

Dr. Doe mentioned two cases occurring in his practice of women who had used douches, quickly followed, in both cases, by intense pain all the

symptoms of prostration. These case were from the abuse of injections, the nurse having inserted the tube too far. He is now very careful in his instructions to nurses and permits the use of the Fountain syringe only, and the insertion of the tube not more than an inch.

Dr. McCollom stated that he always uses vaginal douches in his obstetric cases. They serve to make the woman more comfortable, and there is not so much likelihood of deleterious matter being absorbed. He has never had any trouble from the use of vaginal douches. He thinks the centre hole at the end of the tube should be abolished.

Dr. Richardson said that he believes in preventing trouble by using injections, and keeping the patient clean. Good results have been obtained in hospitals from the use of douches. There is no potent reason why a douche should not be used after delivery, once or twice per day, even if only to keep the parts clean, the same as the stump of an amputated limb is washed. Those who have spoken against the use of the douche, and, to sustain their theory, have brought forward one or two cases, in which bad results have followed, should remember that an occasional bad result carries with it but little weight, the result being due, perhaps, to the method in which the douche had been given. The tube attached to the old Davidson syringe was not suitable to be used for vaginal or intrauterine douches. Now the company manufactures a tube without the centre opening at the end. The Fountain syringe is perhaps safer, but the Davidson, as now constructed, works nicely, satisfactorily washing away deleterious material. The vagina possesses the power of absorption as well as the uterus, and from washing out the former there is no doubt that more or less benefit arises therefrom, for, besides the comfort to the patient, most certainly if any decomposing germs are present the douche must wash them away and, thus far, prevent their absorption. It is his custom to use the douche as a prophylactic measure in private practice as well as in the hospital.

In the Boston Lying-in Hospital douches are given twice daily during the first ten days following confinement, after that once a day. This custom has been kept up for years and no bad results have ever followed the use of the vaginal douche. When it is considered that at the hospital vaginal injections have been given for several years, forming a total of many thousands (a ready calculator can easily see how many), it seems incredible that no accident should have followed their use, like those alluded to by the opponents of antiseptic obstetrics.

Dr. Kingman remarked that, in the first clinic of the Prague Hospital, there had been no deaths for one year and four months among fifteen hundred cases. Copious douches are given regularly with a Fountain syringe through a glass tube having a single large opening.

Dr. Lombard said the vagina is subject to lacerations giving rise to an opportunity for absorption to take place, and douches should be used to

wash away any deleterious substances. It has been shown at maternity hospitals that the mortality has been reduced when injections are used. It would seem that it is the duty of the physician to use them. The dangers from douches arise from their misuse.

Dr. Bowditch said that he came to the meeting indisposed to believe in the necessity of washing out the vagina after every case of labor, which he considered as a physiological fact, not followed or accompanied by a pathological state, save in exceptional cases. Years ago, when a general practitioner, he had had many cases of midwifery. No douches were used, but perfect cleanliness enjoined for the labia and parts adjacent. He had never had the misfortune of losing a patient after labor. The statistics from the large hospitals of the diminution of deaths since using the douche seemed, at first, to prove its value. Yet, after all, have we remembered sufficiently, that coincident in time with the use of the douche there has been everywhere, especially in large hospitals, an endeavor, at least, to get absolute cleanliness of everything with which patients come in contact. These latter items certainly may have done as much as the douche toward this favorable result. It may be asked by some if they have not had the greater influence of the two. Dr. Bowditch thought that the reader had proved, and that the cases cited by other speakers of occasions when collapse of a serious nature, and even death, had occurred after the use of the douche by a trained nurse, amply supported the writer in the position taken, namely, that the operation should not be done in every case, but only in those in which the physician in attendance should deem it necessary as a remedial measure.

Dr. Reynolds remarked that it seems hardly just, in view of the wonderful advance in obstetrical knowledge which the last twenty years have seen, that a member who admits his withdrawal from all participation in these studies for a very long period should venture the sweeping assertions to which we have just listened. No one has a right to speak with clearer authority than that gentleman in those departments of medicine which he has by illustrious service made so peculiarly his own. Injuries at the circle of the os uteri, especially at the junction of the anterior and posterior lips, are in labor the rule, not the exception. How few primiparæ escape without tearing more or less the perinæal surface. Cattle die in giving birth as well as women. In the one case, as in the other, watchful attention, kindness, the intelligent use of means, spares illness and saves life. It is not humane to let the cows take their chance unhelped. Heaven forbid that we should think it of no greater importance to prevent the breaking down of women or their death!

Dr. Stevens, of Cambridge, reported the case of a woman to whom vaginal douches were given after confinement through a Davidson syringe and a tube with no hole in the end. The douches were used daily, and were finally followed, on the ninth day, by very severe pain and collapse.

The woman rallied, and there was a rise of temperature, followed by flowing. She continued to fail and died in three weeks of septicæmia. He is now cautious about using douches. If the lochia are offensive he gives instructions to the nurse about using them, and never permits their use without first so doing.

Dr. Driver said he does not believe in routine treatment. It may be wise to use the douche in hospitals, but in private practice he does not approve of its routine use. If the case is pathological he considers that the douche is indicated, and gives it himself if he does not have a trained nurse in attendance. He has seen pain and tenderness follow the use of the douche even when given by a trained nurse.

Dr. Wingate remarked that it is his custom to use vaginal douches if the nurse is competent to carry out his instructions regarding them. He has not had any unfavorable symptoms arise from their use.

Dr. Charles P. Putnam said it had been claimed that the douche diminished the mortality in child-bed, but were this not the case he should advocate the use of the douche in a crowded community, if only the mortality were not increased. In the country, especially if sparsely settled, putrefaction takes place slowly when compared with a large city where any material like blood putrefies with great rapidity, so that one can hardly say that any childbirth takes place under normal conditions. Douching in childbed might be compared with any of the so-called improvements of modern civilization. The question is not whether it is dangerous, but whether it is less dangerous than the neglect of it. So water-closets and waste-pipes are dangerous in houses, unless great care is taken that they be in good order and that one does not trap the other. But because traps have to be carefully ventilated, we do not abandon them for the still more dangerous vaults. The argument that labor is a physiological process had no weight with him, because life in many other respects is no longer physiological. Savages may require douching as little as they require sewerage. He could not agree with the essayist that the procedure was painful; he had always found that the patients who had not been douched in former labors were glad to have it done. He could not agree with the opinion that the greatest safety was found in the tubes with several slanting holes.

The uterus is not likely to be found lying in the same direction as the vagina and the slanting stream would be as likely to shoot into it as the direct. He thought the best way was to have the opening of the tube at the end and very large so that the current at that point would be slower than anywhere else. In this way all swift currents were avoided, and the water flowed freely and slowly in every direction.

Dr. E. W. Cushing observed that a difference of opinion bordering on asperity was apparent, which seemed to be owing to the different stand-

points of the speakers. Those who practised in crowded localities, and especially in hospitals, were naturally more afraid of septic complications, and desirous of guarding against them, but this paper was not on the treatment of hospital cases, all of which are under peculiar conditions, but on the routine use of the douche in normal cases. It was written as an inquiry as to the duty chiefly of country practitioners, who seldom see septic sequelæ of labor, and seldom have very well trained assistants as nurses. Are they to be considered negligent if not habitually using the douche in all normal cases? Now, admitting for a moment that what the hospital men say is true, that the puerperal uterus is to be considered as a great wound, like the stump of an amputated limb, the speaker would be bold enough to say that stumps and wounds in healthy persons in the country do not need antiseptics, still less the uterus after normal labors. The cases related here to-night, and one seen once by Dr. Cushing, showed that practically douching is dangerous with such nurses as most physicians are likely to have at command. A careful man will always avoid having serious accidents, and even deaths, attributable directly to a treatment which he has adopted on merely theoretic grounds. Against the authority of eminent persons, so dogmatically asserted to-night, may be set that of a medical man, perhaps even more eminent, who, although he lived more than twenty centuries ago, knew something of obstetrics and even of douches, and laid it down as an aphorism that the physician should try to be of benefit to his patient, but should be, at least, sure that he does no harm.

Dr. M. L. Chamberlain said that during the first ten years of his practice he did not use vaginal douches unless unfavorable symptoms developed. For the last five years he has used them regularly and believes in them, and latterly uses the Reservoir syringe only. Professor Lusk, in a recent lecture, reported a death immediately following a vaginal douche of hot water, by a bulb syringe, for hemorrhage after a normal labor. He has since abandoned this form of syringe in obstetrical practice, and uses the Fountain apparatus.

Dr. Chamberlain thinks that the accidents reported from vaginal douches are due to mechanical defects, and has invented a device, which will be shown to the society at its next meeting, that does away with the possibility of air being introduced into the uterine canal, and precludes undue force to the stream. The douche fluid is released in the posterior cul-de-sac—the most frequent site of infection. These douches purify the canal, and he believes in the consequent cleanliness.

Dr. Morton Prince thought that in discussing this question we must distinguish between the use of douches as a luxury and their use as a necessity. These two objects had been confused in the discussion. Douching the vagina was undoubtedly cleanly and added to the comfort of the woman, but when used for such purposes could only be looked upon as a

luxury. The more important question was whether it was necessary to prevent disease. If it did the latter, the practitioner might feel in duty bound for the safety of his patient to use douches in every case of childbirth, even though it might be conceded, there was some slight danger in their use. This was an important question for such physicians who practised among the poor where no conveniences are at hand, and the physician is compelled to give the douches with his own hands. Should such physicians regard it as their *duty* to give douches in every case, as had been asserted here to-night?

Dr. Prince's experience at the Temporary Home, where the most unfavorable cases were received, seemed to show that douches could hardly be regarded as a necessity. All the cases that come to the Home are in labor when they are received; most of them are deserted women; many have walked some distance while in labor; some have already given birth to the child in the public streets; all are in an unfavorable mental condition. Yet during Dr. Price's service, the patients, with one exception, had invariably done well. He had never had a death, and he was informed that there had never been a death in the Home. The cases numbered about one hundred and fifty altogether. It was the custom in the Home to use douches only when the lochia were offensive, or there was a rise of temperature other than that of milk fever. This experience, so far as it went, seemed to go to show that douches were not a necessity, however great a luxury they might be. Dr. Prince did not wish to appear to give an opinion adverse to douches if one desired to use them.

Dr. Richardson replied, to a question by Dr. Garland, that he uses in giving douches a Davidson syringe and a tube without a hole in the end, or the Fountain syringe. He generally uses from a pint to a quart of a two per cent. solution of carbolic acid, at a temperature of 110° to 112°F. The tube should be inserted only a short distance into the vagina, and the fluid should pass in without force: then no trouble will be experienced. For a year and a half he had used, when on duty at the Lying-in Hospital, a solution of corrosive sublimate, 1 part to 2000, but he should hereafter use carbolic acid.

Dr. Chadwick said that he had for years had the greatest faith in antiseptic douches in childbed and resorted to them in all cases where the labor had been terminated instrumentally or the soft parts had been extensively lacerated; likewise upon the supervention of fever or even foul lochia. He had seen no bad results; yet he had never felt that the practice was so devoid of danger as to be as warrantable as the uterine treatment after normal labor in private practice. The enumeration of so many cases in one evening, in which serious or fatal results had resulted from the practice, offered fresh evidence that the danger was by no means insignificant. He maintained that these mishaps could not be explained away by inveighing against the form of syringe used or the carelessness

of nurses. There was no reason to doubt that the douches in these cases had been administered with as much care as could be expected, for the nurses had been graduates of the training-schools, and lying-in hospitals. As to Davidson's syringe, the only serious objection to its use is its liability to admit air with the water. Now there is no evidence to show that the symptoms in these cases were due to the entrance of air into the uterine sinuses: in fact, the evidence is all against such an hypothesis. As to the practices in foreign hospitals, it has been demonstrated that the various antiseptic precautions taken have reduced the mortality marvelously, but it has not been made clear that the vaginal douche is one of the essential features of their methods. An illustration of this point he read a single extract from the last report of Dr. A. V. Macan, master of the Rotunda Hospital in Dublin, whose diminished death-rate, he said, was as remarkable as any that had been made public. As this report had been quoted during the evening as illustrating the harmless and benificent effects of the vaginal douche, the subjointed statement was peculiarly pertinent:—

"Hence, if the prophylactic precautions adopted during labor are sufficient, there can be no necessity for any prophylactic antiseptic injections, whether vaginal or uterine, in the puerperal state, and, as a fact, I never allow them to be used either in hospital or private practice. Indeed, I do not even consider it necessary to use an antiseptic solution for washing the external genitals, which is done twice daily with plain warm water, a piece of oakum taking the place of a syringe, a substitution the credit of which belongs to Dr. Atthill" (page 6).

Dr. Adams in summing up said the paper was perhaps indifferently composed or badly read, as some points seemed to have escaped the notice which he thought they deserved. The statistics to which he referred from Winckel he then read from the book itself, as translated by Dr. Chadwick. These statistics included considerably *more than half a million* cases treated in hospitals and showed that the mortality was four to five times greater than in private dwellings. That it was not adequate to cite, as some of the speakers had done, the experience of *one hospital* (the Rotunda, he believes), *during a single year*, and asks us to believe on this evidence alone that Winckel's statement was ill-founded. He hoped that no one thought that the variety of syringe used was a vital point in the question under discussion. Whether a "Davidson" or a "Fountain" syringe was used, it still remained true that it was essential to give considerable force to the stream of water if you wished to wash out the vagina. That to enter the point of the syringe not more than half an inch within the orifice, or to give to the stream only the force of a column of water a foot in height, could not be called "douching the vagina." Such methods could not effect more than simply to wash out the *orifice* of the vagina. It had been denied that the process was *ever* painful. He could only say that he had frequently found that pain was complained of on merely plac-

ing the finger gently within the ostium vaginæ prepararory to passing the catheter to relieve retention. He agreed with Dr. Reynolds that rents or tears were frequent, especially in primipara, about the vaginal orifice. These readily healed if let alone, but if disturbed, by washing or otherwise, the process of repair might be delayed and the period of auto-infection by these wounds be thus prolonged. He then referred to a discussion on this subject in the seventh International Congress and quoted Professor Tarnier, of Paris, who said that he himself *never used the douche so long as everything went well.* He also quoted Dr. Munde, who, at the New York State Medical Association said, speaking of the antiseptic intra-uterine douche: "It is useless and sometimes positively injurious, first, *where the lochia are not at all offensive.*"

Dr. Garrigues said that he had been disappointed in the douche in the Maternity Hospital, since, in spite of its use in the most thorough manner, there had been many cases of puerperal fever. He said that if we wished to draw a line between the healthy condition, where the douche is not only useless but positively injurious. And the unhealthy, in which the douche may be of the greatest service, such line may very properly be placed at *fetid lochia.* So long as the lochia are not offensive the douche, in his opinion, had better be let alone.

In the *Journal of the American Medical Association*, vol. iii., No. 16, is an article by Dr. Wm. T. Lusk, of New York, on "Sudden death in labor and childbed," in which he says: Air may be forcibly driven into the uterus by means of the uterine or even the vaginal douche. For this reason the syphon syringe ought to be discarded from midwifery practice. It is never a safe instrument, and I have prohibited its employment in all the public institutions with which I heve been connected."

"It is not necessary that the nozzle of the syringe should be introduced directly into the uterine cavity for accidents to occur."

"In a case reported by Wiener in Spiegelberg's clinic, where the tube of the douche apparatus was free from air, collapse resulted from the hydrostatic pressure forcing air previously introduced into the vagina up into the uterine cavity."—*Boston Med. and Surg. Jour.*

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, March 5, 1885.

The President, B. F. Baer, M.D., in the Chair.

Dr. Wm. Goodell read a paper entitled

A Year's Work in Laparotomy,

(Which will be published in full in the *Medical News*).

During the past year he had had thirty-two laparotomies. Of these twenty-two were ovariotomies, eight öophorectomies, one hysterectomy and an explorating incision.

Of the twenty-two ovariotomies, ten were performed in the hospital of the University of Pennsylvania, with three deaths; seven at his private hospital with one death. In eleven, both ovaries were removed. Seventeen had adhesions, which in seven were very formidable. Four of the women were over sixty years of age, and of these one died. In not a single instance did he refuse to operate, though three of his patients were very ill at the time of the operation.

The causes of death were as follows:

An old lady, aged sixty-three, from whom a tumor weighing sixty-five pounds was removed at the Hospital of the University, died suddenly from acute uremia, after doing well for three days. One kidney was found riddled with abscesses, the other was contracted. The second death also occurred at the same hospital, but from peritonitis, caused probably by hospitalism. The third and fourth fatal cases were in advanced stages of septicemia when operated on. Each one had high temperature; frequent pulse and night sweats from suppurating cyst. In addition, one was bedridden and had bed-sores. The other had greatly swollen legs, although the tumor was a small one. In each the adhesions were universal and very formidable. The former died from shock fifteen minutes after the operation. The latter lived one week.

Here was a dermoid cyst, which in his experience was liable to have extensive and firm attachments, making removal often difficult and dangerous. Dermoid cysts also were very vulnerable, taking on inflammation on the slightest provocation. In this instance, a physician had removed some of the fluid with a hypodermic needle. He (Dr. G.) had had two cases of small cyst in Douglass's pouch, in which violent inflammation followed the use of the aspirator. The lives of his patients were for several days in danger, but fortunately they recovered with obliteration of the sac. This should render one cautious about touching a dermoid cyst unless he is prepared to perform the radical operation.

The fifth death occurred in a case forlorn from the outset. Five years ago Dr. Goodell had removed a very large colloid cyst of the left ovary from this woman. A year ago her health began to fail coincidentally with the appearance of another abdominal tumor and she was rapidly pulled down. On opening the abdomen, Dr. G. found that the cyst had burst some time before, and that a colloid material had escaped in large quantities into the peritoneal cavity. The degeneration was plainly malignant, as the womb, broad ligament, bladder and the parietal peritoneum were studded with papillomatous masses. Dr. G. did not see her again, but her physician, Dr. Bauman, of Telford, wrote that the wounds healed perfectly, no abnormal symptoms set in, yet the woman grew weaker and weaker, dying from exhaustion on the sixteenth day after the operation.

Dr. G. stated that this was the only case in which he had twice per-

formed ovariotomy in the same patient, but that he had at present a lady under treatment from whom, four years ago, he had removed the left ovary for cystic degeneration, and in whom the right ovary is now enlarging, and will need extirpation before long. The liability of the sound ovary becoming diseased, amounted, in his cases, to 1.5 per cent. and this strengthened him in the conviction that in women approaching the climacteric, both ovaries should, as a rule, with but few exceptions, be removed. That this case made his third one of colloid degeneration in which the sac had burst some time before the operation. In each the disease was evidently malignant. One survived the operation and went home, but died a few weeks later from a reaccumulation of colloid in the abdominal cavity, and sprouting out of crop of papilomata from the cicatrix in the abdominal wall. In the second one, both ovaries were removed and from great emaciation and weakness the woman became plump and strong. She did well for two years when a tumor made its appearance in the left broad ligament. A year later she died after much suffering. From this experience he would look upon colloid cyst with suspicion, and would give a guarded prognosis in respect to ultimate recovery.

With regard to the causation of ovarian cysts he believed more and more that single life, sterility and unfruitfulness, whether natural or enforced, were important factors. Thus, out of his twenty-two cases, nine were unmarried, and one was a widow. Again, of the married, one was sterile, one had borne but one child, and three had had only two children.

During the past year he had also performed eight oöphorectomies. Three of these operations were demanded for excessive menorrhagia and dysmenorrhea from multiple fibroids, and two of them died, the difficulties of the operation being great. The other oöphorectomies were performed for pernicious menstruation, ovaralgia, and threatened miscarriage, and were successful. In no case did menstruation return, although in one there was a slight show of blood.

Of other laparotomies, he had performed two, one of them an exploratory incision in a woman greatly reduced by pain and obstruction of the bowels; cancer of the pelvic organs was discovered. She died very suddenly from supposed embolism. The other laparotomy was a successful hysterectomy. The tumor weighed thirteen and a half pounds, and consisted of the womb with many large fibroid growths. The adhesions to the abdominal walls, bowels and omentum presented many difficulties and needed many ligatures. The stump which was fully four inches in diameter, was encircled by Kœberle's wire clamp and treated outside of the peritoneal cavity. The patient recovered slowly and without a bad symptom.

The President presented a

GANGRENOUS FIBROID TUMOR OF THE UTERUS

and made the following report of the case.

Mrs. J., a patient of Dr. Ira D. Canfield, of Ronova, Pa., fifty-two years of age, married, has had one child eighteen years ago; she has not been pregnant since. Her abdomen had been rather prominent for years and about five years ago she discovered that it was becoming quite firm and hard over the lower protuberant portion. About the same time her menses began to appear more frequently than usual and to continue longer until during the last year she flooded continuously three weeks out of every four. She thought she sometimes lost a quart of blood in twenty-four hours. There was great tenderness over the abdomen so that the weight of the clothing was intolerable, and she had a constant feeling of painful distension, a sensation of bursting sometimes. These symptoms increased in severity and in the latter part of January, 1885, labor-like pains supervened. Paroxysms of uterine tenesmus occurred several times a day, resulting finally in a discharge of serous fluid and gas which must have been considerable in quantity for the next morning there was marked subsidence of the previously distended abdomen. However, the large, dense, round, and evidently uterine tumor, still remained, tolerating now comparatively rough manipulation, the tenderness having almost entirely disappeared. The quasi-labor-pains increased in frequency and strength, and shreddy putrid masses were occasionally expelled from the vagina. The patient began to show evidences of acute septicæmia. Dr. R. Homsbreng of Lockhaven was now called in consultation, when it was determined that nature was endeavoring to cast off a decomposing uterine fibroid, and an effort was made to assist. Symptoms of blood-poisoning became alarming.

On Feb. 15th, I was hurriedly summoned, and with the patient anæsthetized we found the following condition. Abdomen distended and tympanitic. A globular and symetrical mass outlined within the lower portion of the abdomen extending two inches above the umbilicus, about the size and consistence of the pregnant uterus at the seventh month of gestation. Hanging from the vaginal orifice was an elongated mass of toneless decomposing tissue which resembled the appearance which might be presented by a great mass of amniotic membrane which had been allowed to remain in the parturient canal for several days after labor. It had a purplish, ashy color, and was as thick as my fore-arm. The odor emited was sickening. Passing my hand beside this mass, for I could not easily separate it, I found the os uteri so dilated that the vaginal and cervical canals were almost of the same calibre, and the rim of the os could scarcely be defined. Advancing my hand within the cavity of the uterus, it passed among an immense quantity of semi friable, soft and shreddy tissue, and discovered several large tumors of firm consistence imbedded in, and ap-

parently one with the uterine wall. Indeed it was difficult to define the uterine wall, so irregular and thick was it at some points, and so thin at others. The tissues at the attenuated portions—the uterine wall proper—appeared so weak that I feared the manipulations necessary to enucleate the tumor would make rupture of the uterus iminent. But their immediate removal was imperative, and fortunately their attachments were softened by the process of degeneration which had caused the grave symptoms. I therefore introduced Thomas's spoon-saw, and with that and my fingers I separated and removed section after section until there was nothing left of the uterus but the merest shell. The aggregated quantity removed, a portion of which I present this evening, almost half filled a wooden bucket. The uterus did not contract well after the operation and very free hemorrhage occurred, but it was controlled and the uterus made to contract by large and repeated injections of pure vinegar. The after-treatment was carefully and judiciously conducted by Dr. Canfield and consisted of injections into the uterine cavity of vinegar twice daily until all fetid discharges had ceased.

The improvement in the temperature and pulse of the patient was remarkable, and within a few days she expressed herself as feeling better than she had for years. She is now sitting up apparently restored to health.

Dr. Harris inquired the cause of the gangrenous change in the structure. Was it confined to the new tissue?

Dr. Goodell thought that the process of auto-enucleative was the cause of the degeneration of the tumor. The latter is a low grade of formation and the contractions of the uterus and the constriction caused by the cervix-uteri around the already extended portion interfered with the circulation in the tumor and caused its death. In one case he removed a tumor in which this process had just commenced, the removal of the tumor was followed by a gush of near half a pint of broken down blood which was very offensive in odor. A sharp attack of erysipelas followed.

Dr. Baer could give no other reason than that advanced by Dr. Goodell. The tumor was of slow growth. No ergot was given but labor-like pains supervened and may have cut off the circulation. The degeneration was apparently confined to the new growth.

The President presented the specimen and read the following report of a rapidly growing

PAPILLOMATOUS OVARIAN CYST.

Mrs. G., æt. 41, widow for eight years, has had eight children, the youngest being nine years. She always enjoyed robust health until Sept., 1884, three months before I first saw her. At that time a slight metrorrhagia began without pain or other disturbance. Previous to that time her catamenial periods had been regular. In October she noticed that the lower portion of her abdomen was slightly enlarged a little to the left

of the median line. She thought nothing of it then, but thought that she was growing fat. The hypogastrium, however, continued distended and she began to lose flesh. Her physician, Dr. A. R. Blair, of York, Pa., brought her to see me on Jan. 3, 1885. Her abdomen was then as large as at the sixth month of gestation, symmetrically developed, perfectly smooth, dull on percussion over the distended portion, but resonant in flanks and epigastrium, and there was marked fluctuation. Dark, bloody discharge from uterus, not fetid. It was thought that she was pregnant and that the metrorrhagia was due to threatened miscarriage. But she was losing flesh and there were no rational or physical signs of pregnancy except abdominal enlargement. The uterus was softly prolapsed and retroverted, softer than natural, os patulous, cervix granular, sound two and a half inches, uterus not easily moved because of a mass pressing upon it from above. I diagnosticated a rapidly growing ovarian cyst and advised an immediate operation but she was not ready. I saw her again on Feb. 7th. The tumor had increased to double the size it was at first examination. It was still symmetrical and occupied the same relation to the uterus. She was losing strength and flesh. She now complained of pain all over anterior surface of abdomen and her pulse and temperature were slightly elevated, she at no time suffered pain in the tumor.

On Feb. 18th she entered my private hospital. Has increased greatly in size during the intervening ten days. Circumference at umbilicus fifty-six inches, veins in abdominal wall distended. Tumor still symmetrical and markedly fluctuating. Metrorrhagia has continued daily since its first appearance in September. Suffers from dyspnæa. Pain over abdomen as before, and abdominal wall seemed one with the tumor. I suspected from this circumstance adhesions of tumor to peritoneum. Urine normal.

Operation.—Feb. 20, 11 a.m., assisted by Drs. D. J. M. Miller, J. C. Gabell, in the presence of Drs. A. R. Blair, J. W. Kerr and F. B. Hazel. Incision three inches; tumor almost universally adherent to anterior wall of abdomen and omentum, and very vascular. I passed my hand and separated and then tapped the cyst; the fluid had the color and consistence of healthy pus, and was more than an ordinary wooden pailful in quantity. Solid portion of tumor, larger than the fetal head at term, was delivered through the small incision. The tumor proved to be of the left ovary, and had a very short and vascular pedicle which held it in close contact with the uterus. Ligated and amputated omentum. Transfixed and ligated the pedicle with fine chinese silk gut and dropped. The right ovary, being perfectly healthy, was not removed. The uterus was soft and congested. Peritoneum purple and congested, but there had been no ascitic fluid, and the peritoneal cavity was found free from liquid. Probably ten minutes were spent looking for bleeding vessels, and finishing the "toilet of the peritoneum."

The patient recovered from the anæsthetic without evidence of shock; pulse 98, temperature normal, and she continued to do well until the second day, in the evening of which her temperature reached 100°, its highest point; pulse 108 and strong. She complained of being tired and looked worn. She had not passed flatus from the anus, but there were occasional eructations of foul gas. There was no tympany and no pain, but at about 11 p.m. she vomited, or rather regurgitated, about a pint of yellowish very fetid liquid of a decidedly fecal odor. The large quantity (she had not taken a spoonful of anything since the operation) and the odor, together with the fact that she had not passed flatus from the anus, caused me to suspect intestinal obstruction. Her temperature fell soon after this to 96°, and her pulse rose to 130 and became very feeble. There was no pallor of countenance, and no distention of abdomen or Douglas's cul de sac, or I should have thought this depression, bordering on collapse, was due to hemorrhage. Neither were there any other symptoms of intestinal obstruction than the apparent fecal vomiting and the non escape of flatus from the rectum.

Under the influence of active stimulus, by the rectum and hypodermically, she slowly rallied, but the the temperature did not reach the normal point until the fifth day after the operation, when flatus began to escape from the rectum. Her recovery was rapid after this. The sutures were removed on the eighth day; union complete and solid. She sat up on the thirteenth day. There has not been any bloody discharge from the uterus since the operation.

The tissues of the cyst wall are very friable, and the internal surface is studded with an exuberant papillary growth, presenting an appearance like cauliflower excrescence.

The rapid growth of this tumor to the great size which it attained in five months, the constant metrorrhagia, and the character of the tumor, place this cyst quite out of the usual course of development of ovarian cysts, and make it worthy of record. These are characteristics of malignant disease. Is this a malignant tumor? I think not, in the sense that it will ultimately return, now that it has been removed before the cyst wall had broken down and discharged its contents into the peritoneal cavity. This is the course of papillomatous ovarian cysts. But even when this had occurred and the peritoneum become involved, the disease may not return after removal. Some years ago I assisted Dr. Goodell in the removal of a papillary growth of the ovary in which the cyst had ruptured and discharged its contents into the peritoneal cavity. The peritoneum was greatly involved, being thickly studded at various points with papillary nodules. The patient recovered and the disease has not returned. Dr. Emmet records a like experience. He says, "I have never regarded the condition as malignant in character, or in any respect more than a benign growth, accidental to ovarian tumors and accompanied by an ascitic accu-

mulation. (Ascites complicates a later stage of the disease than my case had reached.) I have however sometimes observed in this supposed malignant disease that patients bore the shock of the operation badly and died from apparently trivial causes." (Prin. and Prac. Gynec., 3d ed., p. 683.)

It is probable that ovarian cysts of very rapid development often have this papillary character. One of the specimens which I presented to this Society at its last meeting was of this description, though less marked, and it had attained a size of thirty pounds in nine months. It is also more probable that the constitution is more profoundly affected by these growths than by the ordinary slow growing ovarian cysts. For these reasons operation should never be deferred in such tumors.

Dr. Harris inquired whether any microscopic examination of the tumor had been made? He always suspected malignancy in rapid growths, and in papillomatous tumors the decision can not be made from appearances, as of two having the same apparent characters one may prove to be malignant and the other benign.

Dr. Goodell remarked that the question of malignancy in ovarian tumors was a most interesting one. As regards papillomatous cysts, Doran had divided them into two classes, one springing from the hilus of the ovary and not necessarily malignant, while papillary growths in cysts of the broad ligament usually indicate malignancy. Some years ago he removed a collapsed papillomatous ovarian cyst upon which the late Dr. Hodge had refused to operate in consequence of supposed malignancy. It was complicated by ascites and the peritoneal cavity had become infected with secondary growths; yet the woman got well and has probably remained well. On the other hand, benign looking growths were sometimes malignant; for instance, he removed a large tumor having many adhesions, twenty-four ligatures were left in the abdominal cavity. It was wholly benign in appearance and the patient got up and about, but soon she became oppressed by rapid breathing. Effusion into the right pleura was discovered, together with malignant growths, affecting that cavity and scattered throughout the abdominal cavity. The tumor was evidently malignant, but it did not look so. In another case of apparently benign cyst, in which the clamp was used, menstruation occurred from the cicatrix and, later, papilloma of stump and abdomen sprouted out from the cicatrix and the patient died. He said that all his cases of colloid tumors, three in number, have become malignant afterwards. In one case, five years after the first operation, the second ovary became diseased, the sac burst and the whole contents of the peritoneal cavity became infected. In another, two years after the removal of both ovaries, the disease returned in the broad ligament, probably from the stump of the ovary. In another case the cicatrix burst open a few weeks after the operation and a large papillomatous growth sprouted out, the lady dying

soon after. Tait considered that among the causes of malignancy are tapping and delay in operating; the age of the cyst tending to malignancy. Dr. G. doubts if the microscope can distinguish between benign and malignant papillomata. Virchow states that although benign at the beginning, they may become malignant in the later stages.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, March 16,, 1885.

The President, Dr. Chas. A. Leale, in the Chair.

The Causes of Still-Birth.

Dr. John Shrady read a paper in which he referred to the difficulty of arriving at the facts because of incomplete or false statistics. Among the chief of the devitalizing causes was syphilis, and, in illustration of the different ways in which the disease affected the fetus and the benefit to be derived from treatment, the details of several cases were given. From a consideration of the cases it appeared that the mother was more likely than the father to transmit syphilis to the progeny. There were certain other disturbances of the mother's health which might act as causes—such as malarial disease, uremic poisoning, the eruptive fevers, inflammation of the vital organs, shock, etc. Of all these, uremia seemed most dangerous to the fetus as well as to the mother. Among the local causes was disease of the placenta, especially so-called fatty degeneration—a term often used because it offered the readiest explanation of many phenomena, or was adopted to conceal ignorance. It was a question whether fatty degeneration of the placenta was not the product of fetal death. A certain amount of this change in the placenta, as well as in the uterus, might be seen toward the latter weeks of pregnancy, and did not necessarily indicate disease. Tuberculosis had been alleged by some and denied by others to be a cause of still-birth. Certain changes in the funis had been considered as a cause, also blows and falls, but many women who sustained blows and falls did not abort, and it might be that, in some cases in which such accidents had been asserted to have caused abortion, the real cause proceeded from an intention to produce miscarriage. He further mentioned prolapsus of the funis. The author then dwelt at greater length upon the reported post-mortem appearances of fetuses born dead—such as changes in the heart, pleuritic adhesions, general fatty degeneration, suppuration of the thymus gland, meconium in the air-passages and stomach, atelectasis, umbilical hernia containing the liver and most of the intestine, etc. The condition of the brain had often been interesting, serous effusion, apoplectic clots, etc., having been found. Dr. Shrady purposely avoided a discussion of abnormal presentations, malformation of the pelvis or small pelvic diameters, in the discussion of the etiology of still-births.

DISCUSSION.

Dr. E. G. Janeway had seen cases of still-birth in which there had been hemorrhage on the surface of the brain and into the brain, malformation of the heart, and other conditions alluded to by the author. One form of degeneration of the placenta which had not been mentioned, and which had come under his observation, was the myxomatous.

Dr. T. H. Manley thought the division of abortions into two classes, according to Churchill, the habitual and the accidental, a good one. He had found malaria a cause of abortion in New York, and had mentioned two cases in which large doses of quinine administered in this disease seemed to have a tendency to bring about expulsion of the fetus. When administered in small doses, this drug had not such an effect. Regarding injury as a cause of abortion, he thought that many women voluntarily took too great exercise for the purpose of inducing miscarriage. He also referred to certain mental states as affecting the vitality of the fetus and causing abortion.

Dr. Wood said, with regard to the effect of malaria and quinine upon pregnancy, that some years ago the physicians of Sacramento, Cal., gave quinine in two-grain doses seven or eight times a day, thus avoiding any tendency to miscarriage. He had seen labor-pains excited by larger doses of quinine; but on diminishing the dose, while giving the same amount of the drug in twenty-four hours, such effects upon the uterus were avoided.

Dr. Macgregor had seen no evil effects from quinine in pregnancy, although he had given it in doses of sixteen grains. He thought the larger doses were necessary in malarial affections, as smaller doses were eliminated from the system before influencing the symptoms.

Dr. McLeod had never hesitated to use quinine during pregnancy, and his opinion of its value was becoming strengthened rather than weakened by experience.

Dr. Janeway remarked that about two-thirds of labors in this city were attended by midwives, and a large percentage of still-births was due to their incompetency and failure to call a physician early in the case.

The President referred to a case in which the obesity of the mother made it necessary to induce premature labor, and he thought that this condition might sometimes so interfere with the expulsion of the child at full term as to cause still-birth—*N. Y. Medical Journal.*

Abortion Mistaken for Menorrhagia in a Woman aged Forty-two. — Dr. E. B. Ward, of Greensboro, Ala., writes: "A multipara aged forty-two had been flowing continuously for over seven weeks. She did not know that she was pregnant, and had been treated for menorrhagia by another physician." Dr. Ward was finally called in just in time to find a fœtus and membranes of about two and a half months which had been expelled in toto. The patient recovered.—*Med. Record.*

Abstracts and Selections.

I. — OBSTETRIC.

Erysipelas as a Complication of Pregnancy and Labor.—In *The American Jour. of Med. Sciences* for January Dr. G. H. Balleray records two cases of labor with concurrent erysipelas without untoward result. He points out that the management of labor in the case of a woman suffering from erysipelas does not materially differ, other things being equal, from the management of a case of normal labor. The accoucheur should abstain from frequent vaginal examinations during labor, and such examinations as are necessary should be made with *clean* hands. The placenta should if possible, be delivered by Crede's method, thus avoiding the introduction of a finger or hand within the genital canal. A full dose of ergot should be given after the delivery of the placenta; and the uterus should be gently manipulated until it is *firmly* contracted. In the after treatment the nurse should be forbidden to touch the genitals of the patient without having previously washed her hands with *hot* water and soap. The use of antiseptic vaginal injections should be commenced within twelve hours after delivery and continued as long as there is any indication for their employment.

The Nerve Centres of the Uterus.—According to the researches of Demke, of Paris, the ganglia found in the interior wall of the vagina are the centres for the contraction of the uterus. The writer thinks he finds confirmation of this in the following case observed by him:

The patient had suffered for some time with metritis and perimetritis. The uterus, increased in size, was very sensitive, covered by exudata (exudats resten) flexed strongly towards the right, but movable. The patient had been for a long time confined to her bed. She had been advised to use injections of warm water. This had caused her such severe pain that she had determined to give up their use. When the patient allowed the physician to make the injections no pain was experienced. The conjecture that the patient had not introduced the uterine tube properly, and had pressed the point against the anterior vaginal wall was thus confirmed. For as soon as the writer touched the anterior wall with the instrument, painful contractions of the uterus were caused, during which the rigidity of the uterus could be easily determined.

The writer believes that by the chronic inflammation in the pelvis, and the hyperæsthesia connected with it, the excitability of the ganglia in question was increased.

In cases of women not pregnant, or who had diseases of no great severity, there were no contractions consequent upon irritation of the vaginal ganglia. The writer is further of the opinion that the effect of vaginal tampons was due to the irritation of the nerve-centres of the uterus. Dr. Kurz in *Schmidt's Jahrbücher*.

Conception Hindering Menstruation.—On Christmas Day, I attended E. T., aged 14 on the 6th of last August. I was told that she had been in labor for more than twelve hours. On examination, I found the os uteri fully dilated, the head high up, and, though the pains were strong, no progress towards descent taking place. I accordingly, with some little difficulty, put on the forceps, and delivered at once.

Mother and child have both made uninterrupted progress towards convalescence, the mother suckling her baby.

The special point of interest in the case lies in the fact that the girl has never menstruated. Connection, which she tells me took place on several separate occasions, evidently resulted in conception at the eve of the first menstrual flow.

Tidy, in his *Legal Medicine*, vol. ii, gives two or three instances of a similar thing taking place, but the comparative rarity of such an accurrence seems to justify me in putting the case on record.—E. A. WRIGHT, M.B., in *The British Medical Journal.*

Ophthalmia Neonatorum.—It is well known that excellent results have followed from Crede's prophylactic measures against purulent ophthalmia in new-born children, so that in the Dresden Lying-in Hospital this disease is now very rare. Drs. Leopold and Wessel have made investigation for the purpose of proving whether this form of ophthalmia be due to a specific poison. The prophylactic measures were therefore suspended in the case of eighteen children. One of these was attacked by ophthalmia, and the mother of this infant had a slight vaginal discharge, in which, however, gonococci were found. On the ninth day of treatment, the conjunctival secretion was found to contain as many of these micro-organisms as at first. All the other infants remained free from ophthalmia, including several whose mothers were suffering from granular vaginitis, and no gonococci could be found in the vaginal secretions of any of the seventeen mothers. This seems to prove the specificity of ophthalmia neonatorum. Hence it would seem that either the prophylactic measures of Crede should be enforced at lying-in hospitals, or else that the vaginal secretions of every mother in such institutions should be microscopically examined. The paper we quote will be found in *Arch. f. Gyn.*, vol xxiv, part 1.—*Brit. Med. Journal.*

Perchloride of Mercury as an Obstetrical Antiseptic.—Of late, perchloride of mercury has been the subject of considerable investigation as an antiseptic in midwifery, and the results have been very satisfactory. Professor Tarnier (*Archives de Tocologie*, July, 1884) has reminded us recently how French researches on this point have been overlooked on the other side of the frontier. In a communication by Professor Kehrer, which has been lately published, the following results are arrived at:

1. Perchloride of mercury is the most powerful of antiseptics.

2. A solution of one in a thousand has been shown to be sufficiently strong to destroy the germinative power of microbes.

3. A solution of 1 in 100,000 added to liquids in which microbes were being cultivated, arrested their development.

4. A solution of 1 in 333,000 definitely arrests development of microbes. Out of 221 lying-in women, Pref. Kehrer only observed four cases of temporary urticaria, and three cases of mercurial stomatitis in three syphilitic patients. In conclusion, the chief drawbacks to the sublimate are a roughening of the hands and easily rusting instruments, making sponges stiff, and giving a deep discoloration to any small depressions of the skin. Prof. Kehrer warmly recommends the employment of perchloride of mercury during labor and lying-in.—*Medical Times.*

II.—GYNECIC.

Nerve Counterfeits of Uterine Diseases.—The above was the subject of a lecture delivered by Dr. Wm. Goodell in the Hospital of the University of Pennsylvania, in which he remarked that: "The crying medical error of the day is, in my opinion, the mistaking of nerve disease for womb disease. From this widespread delusion it has come to pass that no organ in the human body is so overtreated, and consequently so maltreated as the womb." He takes the ground that many cases which have been considered and treated as serious uterine diseases and cases of hysteria are simply, in fact, cases of nerve exhaustion or malnutrition of nerve centres.

In his lecture which was published in full in the *Medical News*, December 6, 1884, he cites numerous cases with more or less detail, which illustrate the position taken. He holds that in a vast majority of bed-ridden or sofa-ridden women, it is not so much any existing uterine trouble that puts them on their backs as it is nerve exhaustion from some nerve-shock. Neurasthenia he finds a most common disorder in our "over-taught, over-sensitive, and over-sedentary women." While reflex uterine symptoms are very common, he finds very seldom occasion for any local uterine treatment of such cases.

Malnutrition of nerve-centres, leads to disturbances of nerve-action and to consequent irregular circulation of blood. Vaso-motor disturbances producing local anæmia or hyperæmia, present different marked symptoms according to the organ affected, and according as hyperæmia or anæmia predominates.

In some cases there is a concurrence of primary uterine disease with secondary nerve exhaustion, as in women worn out with frequent child-bearing or sexual excess. And on the other hand the disturbances of the circulation which are caused by the neurasthenia may beget local structural lesions. These of course may require local treatment. He asserts

that "apart from these cases and those which clearly start from antecedent mischief to the reproductive apparatus, no good comes from local treatment."

As to the causes of this, nerve exhaustions and hysteria, they are quite numerous, the most common ones being those which produce fret, worry or grief—mental wear and tear.

The symptoms of nerve exhaustion includes most of those which have commonly been regarded as symptoms of uterine ailments, such as difficult locomotion, and a bearing down feeling, headache and backache, pain in the left ovary and spinal irritation, weariness and wakefulness, cold feet and an irritable bladder. The sense of fatigue is a remarkable one; the patient is always tired; she wakes up tired, she passes the day tired, and she goes to bed tired. Various other more characteristically "nervous" symptoms and frequent.

For the treatment of these cases he depends upon the methods for which we are indebted to Dr. S. Weir Mitchell. Five points are to be gained, namely, nutrition, sleep, rest of body and mind, freedom from pain, and an equable circulation.

The patients are to be isolated and furnished with a good nurse. Iron is to be administered with malt and a rigid skimmed milk diet. In about a week they usually begin to crave solid food, which is then supplied in fixed rations at stated intervals and the patient is encouraged to drink between meals all the milk she will take. A bath is given every day. Massage and electricity are both used in this plan of treatment. The results attained are certainly wonderful when patients are so situated as to be able to carry out the treatment efficiently. One great difficulty is that many, perhaps a majority, of those who are suffering from nerve exhaustion are so situated that they cannot take such a course of treatment as that.

Dr. Goodell is disposed to run to extremes in what he advocates. While all recognize the truth of the picture which he has drawn, there are other cases like those which he has described which so depend on uterine disease and can only be relieved by treating and curing that uterine disease. *Physician and Surgeon.*

Painful Mamma in Young Girls.—While not very common, yet we occasionally read of this condition, and it is well that we should know that before the Harveian Society of London, Oct. 16, 1884, Mr. John H. Morgan described the case of a well made girl of 11½ years who had suffered from severe pain in the left mamma for some time, which had become more acute lately; the gland was very little enlarged, and showed no symptoms of inflammation, but was the seat of great pain and was very tender to the touch. The pain was continuous, with exacerbations. There was no history of injury; the catamenia had not appeared. Shortly afterwards the right mamma became affected in an exactly identical man-

ner. Neither local nor general treatment afforded relief. After some weeks the pain began to intermit and at length gradually disappeared. Notes were read of six other cases, in five of which the left and in one the right mamma was the seat of pain. The children were between 10½ and 12 years old: none had menstruated, and in none was treatment, either local or constitutional of much benefit. It was suggested that this pain was not due to inflammation but to some developmental changes in the gland, in sympathy with changes in the ovaries and in the organs of generation.—*Med. and Surg. Reporter.*

Irritable Hymen.—Dr. Angus Macdonald reports the following case in the *Edinburgh Med. Jour.*, December, 1884:

Mrs. G., æt. 26, one year married, no children, but one miscarriage. Admitted to ward 28, complaining of dyspareunia.

Physical Examination. — In the deeper part of the vulva, immediately outside the hymen and involving it, there are large, red, excessively irritable patches, which give rise to extreme pain when touched and render marital intercourse impossible.

Treatment.—The part was dressed with iodoform for some time, but as this treatment was only partially successful Dr. Macdonald, on January 22, 1884, removed the mucous membrane all round the hymen, and brought the edges together with a continuous catgut suture.

February 18. — All special irritability has departed from the irritable surfaces and the patient was dismissed cured.

The above is one of a class that gives considerable trouble to the gynecologist. I acted upon the suggestion of the late Dr. Marion Sims, and removed the irritable hymen and adjacent tissues with the knife. To get rid of capillary oozing I brought the surfaces together with the continuous catgut suture. The patient did well and went out apparently cured. Whether the cure has been permanent I have not as yet been able to ascertain.

Temperature in Relation to Menstruation.—Dr. Carl Reinl, physician to the International Bath Hospital at Franzenbad, has recently published, in Volkmann's *Klinische Vorträge*. the result of a valuable series of experiments on the relation of the temperature of a woman's body to the phenomenon of menstruation.

Between November 1883 and February 1884 he took the temperatures of 18 women, who lived under similar conditions, these clinical researches including 18 menstruations and 13 complete menstrual cycles ; in all over 29 menstruations, out of which 3 occurred in two subjects believed to have been completely castrated. He divided the complete menstrual cycle into the 'interval,' the 'premenstrual' period or four days preceding menstruation, the menstrual period, and the 'postmenstrual' period, or four days succeeding menstruation.

The temperatures were taken night and morning and Dr. Reinl calculated thereupon two averages for each of the above periods, to ensure the greatest possible amount of accuracy.

In 11 out of 12 healthy cases, the cycle could be accurately represented as showing a more or less steady wave of temperature. The crest of this wave, that is to say, the highest temperature, represented the premenstrual period. In the midst of the first half of the interval the temperature was at its lowest; it then steadily rose till the second half, when the rise became more rapid, and attained its highest point at the premenstrual period. During the menstrual period, it fell steadily but rather rapidly; the fall continued, but became slower, during the postmenstrual period, and the first few days of the first half of the interval.

Various diseases and operations in the neighborhood of the pelvic organs produced variations in the wave. In cases where no organic disease of the sexual organs could be found, but where the menstrual show was profuse, commencing after a lapse of two or less than three full weeks, and associated with marked constitutional disturbance, the menstrual period corresponded with the crest of the wave. The premenstrual rise and postmenstrual fall were always marked. In cases where local inflammation existed, the wave was, as a rule, much the same as in health, but the rise was more marked at the premenstrual period. The fall, on the other hand, was not so rapid as in health. In other words, patients with gonorrhœa, oöphoritis, or salpingitis, became more feverish towards the menstrual period, and remained so for some days afterwards. Dr. Reinl also made observations on the temperature in two cases of oöphorectomy for fibromyoma with menorrhagia, and one of removal of a dermoid ovarian tumor, the opposite ovary being healthy. In these three cases, the temperature rose during the two menstrual periods succeeding operation. In both the cases of oöphorectomy a 'show' appeared three days after operation; in one the 'show' recurred once only, in the second it never reappeared. Hence the three menstruations, described in the above statistics, as occurring in castrated subjects. These three cases are, however, insufficient for any safe deductions. Dr. Reinl does not believe that the loss of blood is the cause of the fall of temperature during the catamenia, after it has reached its height at the premenstrual period.—*The London Medical Record.*

Diverticulum of the Female Urethra.—Professor Santesson of Stockholm has described a case where a pouched condition of the urethra caused severe symptoms. The patient was a middle aged widow, who after a confinement suffered from difficulty in micturition. At the end of twelve months this symptom had become very troublesome, and a large swelling filled the vagina whenever she passed urine. A catheter could be introduced up the urethra and through a circular orifice into the swelling, and

then urine mixed with mucus escaped as the swelling collapsed. When, on the other hand, the swelling was pressed firmly by the finger introduced into the vagina, it emptied into the bladder, this minipulation always causing great pain. If the woman was prevented from voluntary micturition, for which she felt a desire almost every hour of the day, the bladder emptied itself by a painful spasmodic contraction. After cauterization of the urethra and the removal of three small vascular growths, the woman enjoyed comparative comfort for two years, when the sudden involuntary action of the bladder became very frequent. The vaginal wall of the diverticulum was destroyed by caustics. After the separation of the eschar and healing of the wound, the circumference of the diverticulum was reduced by half. For two years the woman remained free from incontinence of urine and frequent desire to micturate, then these distressing symptoms returned. The remainder of the vaginal wall of the diverticulum, including the cicatrix, was excised, and the edges of the wound united by sutures. The wound partially sloughed, and did not heal completely for four weeks. The diverticulum was now reduced to a mere digital depression, and relief remained complete for four years, when the diverticulum again increased in size, and all the bad symptoms returned. The patient suffered from nephritis, cystitis and dilatation of the urethra, the walls of which were also œdematous. A syphilitic rash was discovered on the trunk and extremities. She was, in fact, in a state quite unfit for any operation, and was sent to an infirmary, where she died two years later, having suffered for about twenty-two years from the diverticulum, excepting during the intervals of relief due to operation. Dr. Santesson felt inclined to attribute the origin of the diverticulum to damage during labor. *Brit. Med. Journal.*

Retro-uterine Hæmatocele.—Dr. P. Zweifel has recently discussed the much disputed question of the treatment of retro-uterine hæmatocèle. Many well known gyecologists are in favor of abdominal section for removal of the effused blood and clot; others favor making an incision through the vagina, and letting out the blood through that canal. Dr. Martin is entirely in favor of the first method, believing that clots can be more thoroughly removed by an opening through the abdominal walls, and the peritoneum deliberately cleaned out, as is constantly done in course of an hysterectomy or an ovariotomy. This practice would certainly be preferred by our well known bold British operators, but it does not find favor with Dr. Zweifel, an advocate of the vaginal operation. He shows that except in one solitary case, the tearing or scraping away of the wall or outermost part of the blood-tumor has been followed by high fever and other signs of reaction. He has found that excellent results follow an incision of about three finger-breadths in the vagina, as the sac can be sufficiently removed in that way by careful scraping with a blunt curette,

which causes but little hemorrhage. In abdominal section some of the fluid contents cannot help escaping into the peritoneal cavity; and this operation, according to Dr. Zweifel, is more difficult than vaginal section. Dr. Zweifel's opinion, however, is not strongly supported by statistics.—*British Med. Journal.*

How to treat the Attachments of Uterine Tumors. — Dr. Thomas Keith, one of the highest living authorities on this subject, writes in the *British Medical Journal*:

I have no one way in dealing with the attachments of uterine tumor. At present each case must be a law unto itself, and of this part of the operation there is much to be learned. A few of the simpler cases may be treated extra-peritoneally. Generally the broad ligament must be left inside, and sometimes the whole attachment, when there is much enucleation, must be so treated. Sometimes the treatment may be entirely intra-peritoneal by means of Kœberlé's *serre-neud*, or it may be halt intra- and half extra-peritoneal. These cases require much care in the after dressing, though the convalescence is much shorter than when the whole is left outside. I am hopeful that the cautery will yet be the safest and best of all the methods of dealing with some of these tumors. The more I use it in ovariotomy the more I like it. It is simply perfect, and its employment seems to me "a higher exercise of our art" than the ligature, which, apart from the chances of hemorrhage, embraces ten times the amount of tissue that is really necessary. That a more perfect way will soon be found I have little doubt. This will do as much for uterine tumors as Baker Brown's intra-peritoneal method has done for ovariotomy ever since 1864.

III.—DISEASES OF CHILDREN.

Successive Craniotomies in the same Subject.—Under the care of Dr. Fancourt Barnes, at the British Lying-in Hospital.

The patient, H. D. H., aged 28, a small rickety woman, came into the hospital on November 7th, 1883, being at that time seven months advanced in her eighth pregnancy. She came into the hospital for the purpose of having labor induced, on account of contracted pelvis. In her first labor, she was delivered at full term by craniotomy. Her second labor was induced at seven months, and terminated by craniotomy. The same procedure was adopted with the third and fourth labors. Her fifth pregnancy ended by the induction of labor at six months and a half, completed by craniotomy. Induction of premature labor was also resorted to in her sixth pregnancy, at six months and a half gestation, when she was naturally delivered of female twins, the first of which survived four hours, the second three days. Her seventh pregnancy was concluded by the induction of labor at six and a half months, and the natural delivery of a still-

born female child. In her eighth pregnancy, Dr. Fancourt Barnes induced premature labor on November 7th, 1883, by passing a carbolized bougie up into the uterus, between it and the membranes. Labor supervened in thirteen hours, and delivery was effected by Fancourt Barnes's cephalotribe; the child was a male. The lying-in was uncomplicated by unfavorable symptoms. The temperature was normal, except on November 13th, when it rose to 103.6° in the morning; it fell to 101.2° in the evening of the same day. On the morning of November 14th, the temperature was 101°, and in the evening it was normal. On November 15th, the morning temperature was 100.2°; in the evening it was normal, and remained so until the patient's discharge on November 22nd.

REMARKS BY DR. FANCOURT BARNES.

The above case is of interest as an example of a succession of craniotomies in the same woman. The case affords a striking answer to those who regard craniotomy as a dangerous operation to the mother. In this case, the mother was safely delivered by craniotomy on six occasions. Her case also affords proof as to the safety of inducing premature labor—a proceeding which she underwent seven times. An equally important question, however, is that of the destruction of six children by craniotomy. The results of the sixth and seventh pregnancies show that, even when it was possible to secure delivery by induction of premature labor without craniotomy, the children could not survive, because labor was induced at six months and a half. When, however, labor was induced at seven months, delivery was impossible without craniotomy. In such circumstances as the above, the question arises: Is the obstetrician justified in continuing to sacrifice a series of children, when he might, by one of the Cæsarean operations, save both mother and child?—*British Medical Journal.*

Hysteria in Children. — (Schäfer, *Arch. f. Kinderh.*, B. v., H. 9 and 10.) The definition of Romber that hysteria is a reflex neurosis which is caused by irritation of the genital organs, has not been sustained by investigations which have been made since his time. These investigations have also shown that this disease is by no means peculiar to adult females, Briquet's researches showing that about five per cent of all cases occur in men, those of West, Bohn, A. Jacobi, Smidt and others showing that it is not uncommon in both sexes in children. Among the latter it is not developed at the period of puberty with much greater frequency than at other periods of life, and it has been observed during the nursing period. A sharp distinction is made by the author between hysteria and mere simulation, which latter is more common among children than will be admitted by many. This distinction cannot always be readily made. Thus vomiting and convulsions may both be mere simulation, or they may be hysterical or nearly or quite involuntary.

Concerning the etiology of this condition, a nervous temperament or disposition in the parents, in a word, heredity, exercises the most important influence. Faulty education, improper food and hygiene are also important factors. Other causes are found in the prostrating influences of severe illness and vicious habits. Among the latter may be mentioned masturbation, upon which A. Jacobi lays great stress as an etiological factor.

The phenomena which are presented by children suffering from this condition are as varied as those which are seen in adults. With reference to disturbances of the sensibility of the nervous system, there may appear hyperæsthesia, anæsthesia and paræsthesia, and these may be manifested by great sensitiveness to pressure in various localities, neuralgic pains, especially about the head and face, and painful joint affections under the head of hyperæsthesia. Uuder the head of anæsthesia may be mentioned a general or local insusceptibility to pain, with more or less obtuseness of the senses in general. Paræsthesiæ are seen mainly in the form of perverted sensations. In the domain of the motor nerves, great variety is also manifested. The spasms may be either tonic or clonic, and embrace either one or several muscles or groups of muscles. Not alone are the skeletal muscles thus involved, but the affection may include the muscular apparatus of the stomach, esophagus, vocal organs, and other organs of the body, and give rise to vomiting, stricture, cough, or other phenomena. Hysterical paralyses are usually limited to the extremities of one or both sides, and are not infrequently associated with anæsthesia, as in the genuine affections. Vaso-motor changes may also be a feature of this condition, leading to abnormalities in the blood supply of parts and organs. Increased or diminished activity of the sweat glands may be mentioned in connection with this portion of the subject; also increased or diminished functional activity in the salivary glands, kidneys and intestines. The psychical condition of an hysterical child is usually a disturbed one, he is apt to be irritable, egotistical and unnatural, but there is seldom a development into insanity. The prognosis is somewhat better among children than among adults, still, in children of an inherited hysterical tendency the prospects of complete recovery are not flattering. Remissions, however, of varying duration may be looked for, even in cases which do not promise well in regard to ultimate recovery.

Treatment.—In regard to treatment, it should be remarked that prevention is often possible by careful attention to education, hygiene, etc. Plenty of exercise should be insisted upon, the mind should be directed away and apart from itself; especially should masturbation and other hurtful habits be guarded against. As to medicines, they are to be avoided as far as possible, the anti-hysterical drugs, valerian, assafetida, galbanum, bromide of potash and musk being only for extreme cases. Electricity and cold baths will often prove to be useful and tonic in their effects.

During an hysterical spasm care should be taken that the patient does not injure himself, but sympathy should be withheld. In severe cases it may be necessary to administer chloral, chloroform and morphine; in others the free application of cold water to the surface of the body will be effective. In all cases the condition may be more effectually treated apart from the credulity and sympathy of home and friends — *Archives of Pediatrics.*

Diarrhœa of Infants.—Charcoal.—During one of the discussions on the alimentation and diseases of infants, which now occupy so much attention in France, M. Jules Guerin stated that the addition of a little charcoal, (about half a teaspoonful of Beluc's or other finely-powdered charcoal), to a nursing-bottle full of milk exerts a most remarkable curative effect upon the diarrhœa of infants. He has repeatedly seen children who had become exhausted by seven or eight days' duration of an obstinate diarrhœa, regain all the appearance of health in two or three days. At the same time that the charcoal is added, the milk should also be diluted with a half or a third of sugared water, the children taking the mixture without any repugnance, and no vomiting being induced.—*Boston Jour. Chem.*

Cocaine Ointment for Piles.—Dr. F. A, Burrall writes: "Please mention in your coca literature that the coca leaves treated with heated lard and an alkali form an ointment resembling stramonium ointment, which seems to possess soothing properties. Applied to the tongue it leaves an impression similar to that produced by a solution of muriate of cocaine. This ointment, prepared at my request by a leading pharmacist of this city, has been used in three cases of hemorrhoids with the effect of alleviating pain. The muriate of cocaine will, I think, be found of service in such cases, and this alkaline ointment is also worthy of further trial as a local anodyne.—*N. Y. Med. Record.*

The Value of Condensed Milk. — Mr. T. Maben says in the *Druggist's Circular:*

Condensed milk is more digestible than ordinary cow's milk — a fact which is admitted even by those who say it should not be used. It is less liable to turn sour in the bottle, and how great a boon this is is known only to those who have to do with feeding bottles. It is less liable to decompose in the stomach. A medical friend informs me that he frequently finds that children fed on cow's milk are troubled with flatulency, diarrhœa, green stools and want of health generally, and that on changing the food to condensed milk these symptoms at once disappear, and a most healthy condition of the body is induced. Condensed milk is less liable to vary in composition and more likely to be pure. It is well known that

the quality of the cow's milk varies with the food supplied to the cow, and in these days it is often the main object to have quantity, quality is frequently at a discount. Besides this, the change of a cow, the introduction of a new cow into the dairy, the use of the milk before it is quite free from the colostrum—all these have often been accompanied by dangerous results. Now this can not happen with condensed milk. It is in the interest of the dairymen themselves to use the richest milk for condensing purposes; the cows are fed on nature's food, whether in the green Swiss valleys or the Norwegian *dals*, or "in the pastures of the far-famed Acadia of Longfellow's 'Evangeline,'" as one advertisement sets forth in poetic language, and if due care is taken to mix and properly condense and preserve the milk, the chances of variation or impurity are indeed few and far between. The conclusion, therefore, at which I arrive is that when mother's milk is not available a good, sweetened condensed milk is the best substitute, and though it is not by any means a model food it is not quite so unsatisfactory as some authorities would have us believe.

SPECIAL CAUTION.—It has come to our knowledge that certain Druggists substitute various acids for "HORSFORD'S ACID PHOSPHATE," especially when "Acid Phosphate" is named without the prefix "Horsford's."

Dilute phosphoric, citric and sulphuric acids have been so used, for the reason, we presume, of their low cost.

We especially recommend physicians to write the full name, "HORSFORD'S ACID PHOSPHATE," in their prescriptions to guard against impositions.

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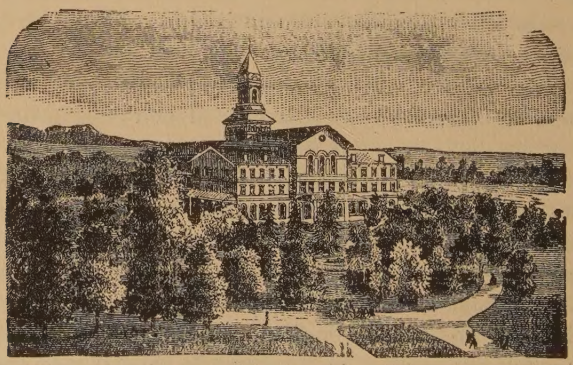

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